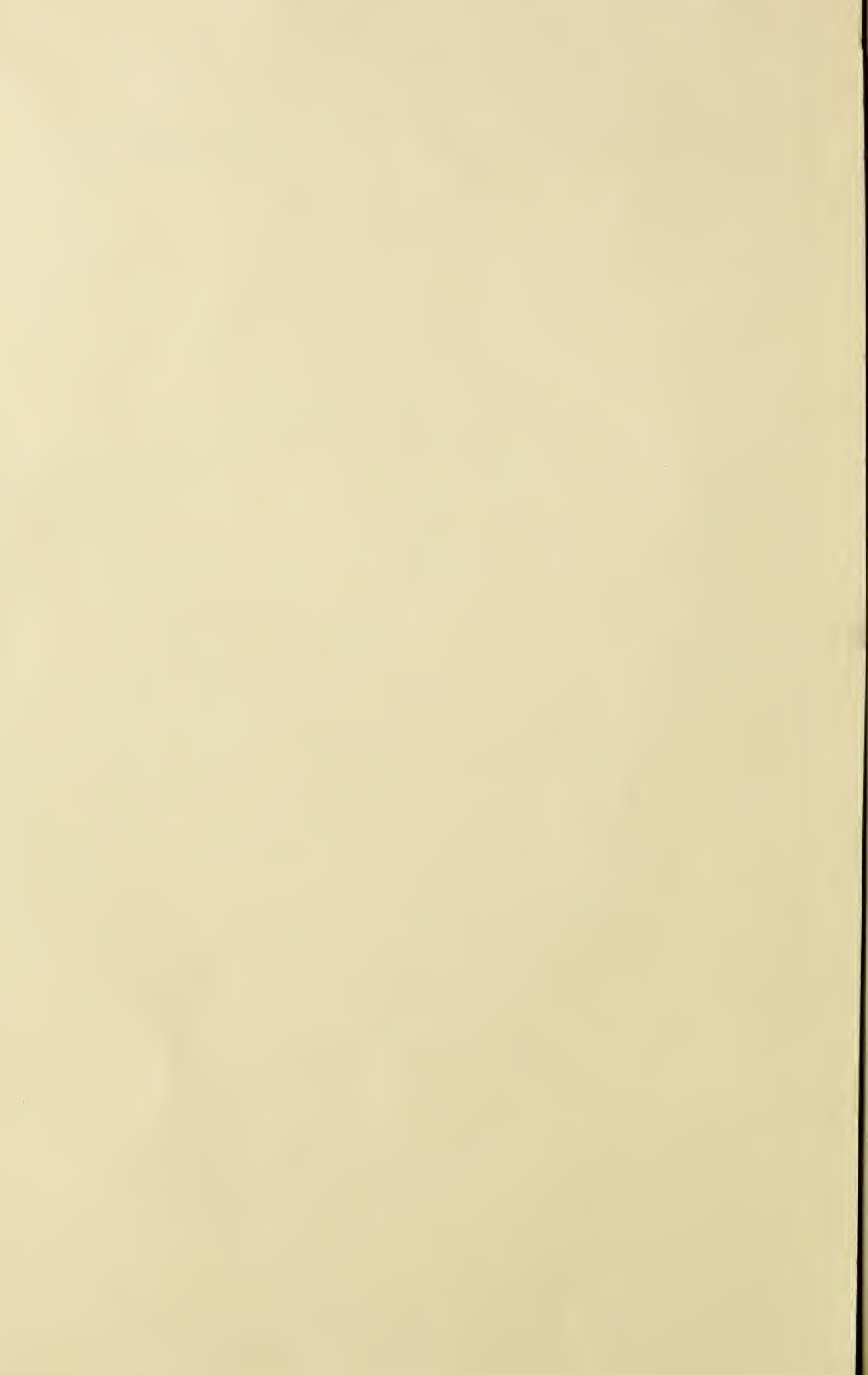


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# THE MARYLAND FARMER:

DEVOTED TO  
Agriculture, Horticulture, and Rural Economy.

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## NOTES AND COMMENTARIES.

BY PATUXENT PLANTER.

### **Tobacco and the Season.**

A more peculiarly fine season for the housing and curing of tobacco I have seldom seen. Cool, dry and light winds, with the tobacco well ripened in the field, must make it cure quickly and with bright color. It is likely to weigh well also. The drought which has prevailed for some weeks, and continues to this date, (14th,) has materially lessened the quantity grown, and instead of there being in this section an unusual crop, as was anticipated, it will fall short. I predict a small crop, but a beautiful one in texture and color. The pastures have suffered greatly—beef cattle must be fed high on corn or they will not be prime. They must be "corned" at home before they are made so by the butcher.—All stock will go into winter quarters thin, and therefore require more provender, which will necessitate the careful preservation of the corn fodder, as hay is scarce and high in price.

### **Corn.**

The expectations as to the yield of this crop must be disappointed. It has failed to meet its early promise. In consequence of the insects, storms, hail, floods in some of the places, drought in others, a cold spell in the time of "shooting," and hot, dry and windy weather when ripening, the crop in the whole country must be short, and prices will necessarily rule high. There is every reason why the corn grower should look for high prices for this crop.

While speaking of this kind of grains I am reminded of Mr. Lawrence's practical remarks in the September number of the *Farmer* about experiments. Farmers are always more or less in various ways experimenting with different crops, but seldom do they experiment with corn. This is in this country

the most important of all crops. A total failure of the corn crop would produce a famine in this land as distressing as that now afflicting Persia. Careful experiments with this cereal could be made at small cost of time and trouble or expense, as half an acre could be made to serve several different tests as to the results desired to be arrived at, such as mode of culture, distance to be planted, size and weight of grain, cob, fodder, as also value of two or more manures in the production of this crop. It is disputed which is best, drill or check. This point could be settled easily by a few neighbors agreeing to experiment the same year, and giving the same work to both the corn in check and in drill. The heaviest yield has been from corn in the drill, but it has been attributed by some to the better working it received. The chief objection to the drill system is, that it requires hand-hoeing. Would not corn in the check be all the better for such a thorough working? I have never read or heard of an uncommonly or enormous yield where the crop had not received a timely and careful hand-hoeing.—The advocates of the drill contend that the labor expended in working with the hoe is saved in the planting, and that such working gives an increased amount of product. I am inclined to this theory myself. I have seen astonishing results from drilling corn. Should not every farmer experiment each year as to distance, number of plants to a hill at different distances, with tall and low-growing corn? Also make an effort, by careful selection, to improve either the number of ears on a stalk, size of the same, weight and size of grain, number of grains on the ear, or all these together. It is yet undecided whether big cob corn or small cob yields most per acre; the latter will, I know, shell more to the barrel, but whether all things considered, such as time saved in the handling, husking, &c., the big cob does not yield more to the hill, is still a disputed point. Many years ago I took two ears from

one hill of large cob gourdseed yellow corn, and ten ears of Baden corn, small cob, from two hills, and the two ears from one hill shelled half a gill more than the ten ears from *two*. But again, the delicate cobbled Sandford corn shells enormously to the barrel, as well as to the hill. Another matter of experiment, very easily made, is for each one to select a fine kind of corn, and for a series of years select the best ears for planting, alike in color, texture and size of grain, so as to produce uniformity in sample, and thus endeavor to obtain a distinct and better variety. This can be done more readily with corn than has been done with smaller vegetables. Such was the way that grand triumph of perseverance, the Trophy tomato, was obtained, which is now admitted to be so superior to all other sorts as to amount to almost perfection. But after all, the great experiment the farmer should make is to test the difference in cost of raising twenty barrels on one acre, and the same quantity on four acres.—Deep plowing, thorough culture, high manuring, will assuredly yield as much on one, as poor cultivation, and no manure, will on four or five acres, and with much less labor, the increased value of the land paying for the manure.

#### Middlemen.

I rejoice to see the newspapers are ventilating this class of harpies. They are the obstacles that prevent producers from receiving an honest and only a fair price for their products, and consumers from obtaining the same at reasonable prices. These middlemen compel the consumer to pay three or four times what the rural producer receives for his fruits, vegetables, and "truck" he has to sell, even at less, sometimes, than cost of production, because he can do no better, being at the mercy of the combination of middlemen and hucksters. Town and country people are alike deeply interested in this shameful robbery, and should unite in putting it down.

NEW SORREL THEORY.—In a communication to the *Germantown Telegraph*, Mr. Josiah Clark, of Manchester, N. H., says: Sorrel is not, as is generally supposed, the result of sour soil, but the reverse. Observing years ago that sorrel was more abundant on sweet than sour soil, I hauled apple pomace on a piece where nothing but sorrel grew, and harrowed it and put grass seed in. The result was, sorrel disappeared and grass came in its stead. Anything that tends to sour with fertile matter added, will work a cure just as alkali rectifies the acidity in the stomach. The sour waste of breweries, coarse, wet, sour litter, vinegar or anything that is sour, worked into the surface of the soil will tend to eradicate sorrel.

#### FARM, GARDEN AND TRUCK PATCHES.

Our farmers might make, it seems to us, a great deal more than they do of their kitchen gardens and truck patches. These are now only too apt to be the most neglected portions of the farm. It is doubtful indeed if they are, in many cases, considered as belonging to the farm at all. They are tolerated as necessary to supply the table with a certain quantity of indifferent vegetables, with as little labor taken from field operations as possible. Every moment given to them is begrudged, and the work in them is often almost wholly performed by the women and children of the household, and becomes an additional burden upon the wife and daughters.

All this is done under the prevailing idea that the garden and truck patch pay nothing in comparison with the farm proper, and are therefore worthy of but little attention. This idea is eminently false. In the first place, if we only take the important item of health of body, and strength for renewed labor, there is a wide difference between the effects produced by the consumption of vegetable food when well cultivated and well matured, and when stunted by poor ground and weeds, and consequently grown small and stringy, or hard and dry. There is a difference, too, and a very material one, between having an abundance and variety of such food more than sufficient for each day's needs, and the scanty and intermittent supply that results from neglect or carelessness. For his own sake, then, and for that of his family, for their health as well as pleasure, a flourishing, well cared for, and well stocked garden is to every farmer an essential part of the farm. No labor will be lost that is bestowed upon it, even if such labor be taken to some extent from the corn field or wheat field. There is no necessity, however, that these latter should suffer. The proper working of the garden at present often causes delay and trouble, because the opinion is held that any spare day will do to devote to it, and the consequence is that just when it most needs attention other work presses and it is neglected. Let it but be considered as a part of the farm, equal in its call for work upon it to any other portion, and then a time will be, in any systematic farming, set apart for its cultivation, and the time to be given to it will be calculated so as to dovetail in with the other out-door labor.

What we have said is sufficient to point out, in a cursory way, the benefits arising from proper care bestowed upon this essential part of any well conducted farm. We go farther than this, however, and say that the garden and truck patch have been, and can be made, in skilful hands, to yield a profit as great, in proportion to the time and labor spent upon it, as any.



The demand in all our large cities for garden products is increasing. Of certain kinds, such as peas and tomatoes, the fruit packers take from year to year large supplies. There is but little fear of the demand failing from over production. Of course during some seasons certain garden vegetables will be a drug in the market. This is to be looked for and expected. During the last twenty years each and every kind of vegetable grown to any extent for market, with the single exception of asparagus, has at times fallen below the cost of production.—Such loss, however, in particular things occur in farming as well as in gardening. It would be hard indeed, to point to any business, mercantile or agricultural, in which such losses in particular branches do not occur. Such a condition of affairs is no discouragement to market gardening.

At the risk of going over what is supposed to be known by nearly everyone, and but too frequently is not, we give a few simple directions upon the subject.

The best soil for a garden is one that is warm, deep, and moderately dry. A sandy loam is to be preferred if it can be obtained. If the character of the soil is different, and is liable to become hard and compact, it will be necessary to render it loose and friable by underdraining long stable manure, lime, and, if possible, wood's earth and ashes. Even when all this is done, the sandy loam, if in a good exposure, will have the advantage from its power to absorb and retain the heat of the sun, and thereby mature the plants earlier.

From fifty to sixty two-horse loads of stable manure per acre can be used with good effect. Apply these in the fall and plow well in. Plow and harrow again thoroughly in the spring, and use either bone dust, guano, or super-phosphate of lime.—This statement is a general one upon good authority, and must be taken as such. It will not, probably, answer in all cases. Every gardener must find out by experience the quantity and kind of manure and top-dressing most suited to the soil he cultivates.

Now, when the beds are all laid, and the soil pulverized as much as possible, the next thing is to sow the seeds. These, whether for the garden or truck patch, should of course be sound and of the very best quality. Moreover, this thing is also to be considered—some plants mature early, others late, and in the garden as in the truck patch the true aim is so to utilize the soil as to get as many crops off the same land as it is possible to do—by concentration of labor and heavy manuring. Such crops as come in rotation during the season should be studied, and as soon as one crop is taken off preparation should be made for a second. The true

secret of gardening to a profit lies in heavy manuring, thorough culture, and a quick rotation of crops. There is no farmer, as there is certainly no market gardener, who can carry on his work effectually without the use of frames, both hot and cold. Hot beds to advance vegetables for the table or for sale early, and cold frames to carry half hardy vegetables—as lettuce for instance—through the winter without damage. The value of having early vegetables, whether for home use or for sale, cannot be over rated. Everybody knows what high prices the first vegetables of the season bring in the market, and everybody ought also to know how much the health of the farmer's family may be promoted by having kale and sprouts and cabbage, tomatoes, radishes, cress, and such like vegetables for early use. Salt meats, and the absence of fruit during the winter season, make the free use of vegetables absolutely necessary in the early spring, because of their medicinal properties in purifying the blood, and cleansing the system from that grossness which attends the thickened blood of winter.

Yet how few of our farmers pay proper attention to this subject. The market gardeners find it to their interest to meet the popular demand. Hence it is that peas, beans, beets, tomatoes, and indeed the whole list of early vegetables are to be found in our city markets weeks before those in the farmer's garden are ready for the table. The difference lies in the use of hot and cold frames, and the forcing process adopted by the market gardeners, whilst the farmer simply relies on the natural soil, and the sluggish growth that is common to vegetables under ordinary circumstances. And yet how simply and easily all this might be obviated. The only thing required to be done is to start the plants early.—Start them in box in the kitchen window, when the supply required is small, or start them in hot-beds properly prepared which is better still. Anybody can make a hot-bed frame. It is nothing more than an oblong box made of stout plank, although even inch plank may be used if no better can be had. Glass for the lights is cheap, but where glass cannot be had oiled muslin, or even stout white paper, rubbed over with kerosine oil, will answer temporarily. A few loads of long manure, and some rich, sifted, *dry* earth, and the thing is done. Will not our friends profit by these suggestions, and so have plenty of vegetables—for health's sake, as well as for the more economical use of meats—upon their table early in the season, and plenty also to store away for use during the winter?

To a lady use kind words. They are easier, cheaper, and ought to mean more than others. You have, or once had, a mother; you may or may not have, or have had, a sister. It is one and the same. The sex merits politeness.

JAKOBB DUNK PAPERS  
ON  
FILOSOPHY, FACTS AND FARMIN.  
PAPER NUMBER I.

*To the Editors of the Maryland Farmer:*

The written page is bright with the recorded achievements of thousands of distinguished heroes. In our own country Irving delighted the indomitable Knickerbockers with the famous performances of Rip Van Winkle and Ichabod Crane. Cooper has held the generations spell-bound over the exploits of Leather Stocking and his heroes of the sea, and the Georgia Bronte, with the few swift strides of a master, has placed herself in the van, startling the world by the love-deeds of that queen of heroines, Irene. But these were creatures of the imagination; beautifully illustrative of manner, character and sublime moral principles it is true, but still drawn from the imagination. Now I purpose to surpass the efforts of my illustrious predecessors in the portrayal of the remarkable achievements of my hero, Jakobb Dunk, who is of the earth, earthy: of Maryland, and original. It is true the distinguished authors I have mentioned had a harder task to perform in depicting imaginary characters than I shall have in exhibiting a real one; which fact must be remembered in making the awards for comparative merit; but the peculiar disadvantages under which I labor—in holding up the performances of a living man, very often to ridicule and censure, thereby securing his own personal animosity, and the opposition of his friends and countrymen—I think will place us upon an equality in regard to the severity of our respective ordeals, and I hasten to forward you an account of those exploits, together with the corruscations of that same intellect whose brightness is rapidly disappearing under the operation of manifold causes, sufficiently potent to destroy its lustre within a limited period. I make no apology, Mr. Editor, for this lengthy preface; I may be in the minority, but I like a preface. I always read them. Before spending (I will not say wasting) my time in the perusal of a work, I want to know something about the author as well as his heroes. I want to know what claim he has on my valuable time; whether he intends to give me an equivalent for said valuable time; what he intends to do, and *how* he intends to do it, and if I am not satisfied with my cross-examination I have my remedy: I turn to the triumphant records of the masters; the classics are inexhaustible. Reader, if you are not satisfied with the work I offer you in exchange for your time (which is money,) and your trouble, (which is more,) you have relief at hand; turn to your library—the classics are inexhaustible. In the

first place I have seen a considerable portion of our common country, north, south, east and west, have become measurably acquainted with the principles and processes of agriculture prevailing in those sections. I have raised corn on the western prairies, and cotton in the cotton States. I have seen the Indians walking in their unbent manhood through their native woods on the confines of civilization, and I have seen the "clay-eaters" and "sand-billers" groveling in their squalor, even under the shadows of the tree of plenty; and while it may be my task at some future time to depict their peculiarities, I select now the character from which we may derive, if not the greatest amusement, at least the greatest profit. Wedded to the precepts and practices of his "ancient ancestors," as the pedagogue in Rory O'More called them, he sees in the improvements of modern times only the innovations which the intrigues of self interest are forcing upon the market. Forgetting the story of his own grandfather, or *his* grandfather fleeing from persecution to the western asylum as a city of refuge, he persistently opposes every effort to induce immigration as a "scheme" to rob him of his hearth and home. Insensible to the change wrought in the surface of the country from a howling wilderness to grain and pasture land, he objects to a dog tax because it will take "some money" to meet it. Standing still in the midst of the rush of the wheels of progress, he will devote no time to attend a Farmers' Club meeting, because he has "something better to do." Bridges are of no value because a "flood washes them away and makes the 'old ford' worse than it used to be." Improved roads and turnpikes may be built for all he cares, he "will pay his toll on them," (simply because he will be *obliged* to,) but not one cent of time nor money will he give to establish them, and as for lyceums and competitive exhibitions, his forefathers were able to get along without them, and "he reckons" he can do so to.

Now, Mr. Editor, I have given you a portion of the plan of my operations, and I will let my hero tell his own story, and after you have heard that you will be at no loss to ascertain *why*, with a healthy climate, close proximity to a seaport, commercial and intellectual center, resting upon the borders of a magnificent capital, and within a night's ride of the metropolis of the western hemisphere, the lands of Maryland lie abandoned, unimproved and covered with mortgages, her people burdened with excessive taxation, and a prey to the exactions of discerning capitalists, who are reaping a harvest from her impoverished resources.

They tell of a farmer who was so lazy that when he went to hoe corn he worked slow that the shade of his broad-brimmed hat killed the plants.



For the Maryland Farmer.

### URINE AS A MANURE.

I find a very valuable article under the above caption, in the January number of the current volume of the *Farmer*, from the very able pen of your contributor, *Giardinieri*.

I indorse the correctness, and admire the clear and interesting manner in which he defines the chemical nature, and the value of urine as a fertilizer, but I cannot agree with him in the mode recommended by which to absorb it, nor his mode of manipulation and application.

He says "every farmer should have suitable shelters under which to store his manure, without exposure to the out-door elements; he should then provide suitable quantities of dry mold—earth—according to the stock kept under cover, and place it daily in his stables, sufficient to absorb all the liquids—this can be re-used, if necessary, by drying—and when cleaned from the stables let it be mixed with the solids, and kept under cover till ready to be applied to the soil."

"Here the urine undergoes its essential changes, becomes a most efficacious manure, and being mixed with the earth, the solid excrements, etc., the whole mass is greatly improved."

The hypothesis in the last paragraph I do not deny, but I claim that it is not economical to incorporate soil, saturated with urine, with the solid excrements, and other rough fertilizing materials of the manure house or barn yard, but that the urine and earth used as an absorbant may be more profitably used by itself, or without composting as recommended.

I would greatly prefer, once I have the urine separated from the solid excrement, and other extraneous substances to be used as fertilizers, to store and apply it separately, and for special purposes, *e. g.* upon the garden, and upon hoed crops, as it is free from grass and foul seeds, and being very efficient and active in its effects, it is peculiarly adapted to the crops I have named.

It is essential as G. claims, that urine should ferment; but there is great danger of decomposition extending to that degree, before it is applied to the soil and crop, that much of its value shall be dissipated.

I have tested different modes of preserving and applying urine, and my present conviction is that the stables of both cattle and horses should be so constructed that the urine will all drain or flow into a tank for the purpose, into which no foreign water should be admitted; and no foreign substance except, say twenty-five pounds to the hoghead, of finely ground gypsum, need be applied to it, by

which to fix or convert to a sulphate its volatile qualities.

I have found that its rapid tendency to ferment soon prepares it for use, in the tank, even in the ground, and of course below the effect of frost. As soon as it is slightly fermented, the solid matter in solution in it, is in a condition to be utilized by growing vegetation, and if not utilized it is very liable to be dissipated in various ways; the greatest waste, if applied on porous soils, being, perhaps, by leaching below or out of the plant bed, though much of it is liable to volatilize if not incorporated with a considerable depth of soil. On account of the qualities of urine that I have described, it is judicious to apply in two or more applications in the same season, and on the same crop.

The first should be applied as near as practicable at the time of planting; the second, which should be more liberal than the first, as the necessities of the crop, and its capacity to utilize so prompt a fertilizer are increased, at a later period of its growth.

I have applied it thus, with a liquid manure cart, more economically, and with more profitable results than I have ever realized from composting it with anything, though I have fully tested both dried muck and strong, pulverized clay.

The first application was over the entire surface, the second was made between the rows or drills of crops, just where the feeders of the plant roots are in the ground to receive their food.

Land devoted to root culture, or to a hoed crop, for several years, and fertilized with liquid urine and concentrated fertilizers, containing no foul or other seeds, will soon become so free from weeds that the cost of culture is greatly reduced, and the productiveness of the land very satisfactory. If applied in a liquid state to grass or small grain crops, it should be diluted fully 30 per cent., unless the application is immediately followed by a copious rain. If the solid excrement of cattle and horses has no urine mixed with it, and only the straw, &c., of the barn yard or stable, it is less volatile than when incorporated with the urine, and is well adapted to the purpose of top-dressing, as it is slow in decomposing, and continues to yield daily food, as well as shade protection, nearly or quite as important for a greater length of time.

It was my purpose to have described in this connection how the stable should be constructed to preserve all the urine separate from the solid excrement, which I do effectually with my Patent Horse Stall, but on account of the already too great length of this article, I shall be obliged to make it the subject of another next month.

Truly yours,

J. WILKINSON,  
Baltimore, Md.

Paper was first made from linen, 1302.

*For the Maryland Farmer.*

### THE FARM, GARDEN AND FIRESIDE.

*Farm, garden, fireside!* What delightful visions and holy associations cluster around these words. What recollections they call up; thoughts of childhood and youth; of *home*—the old farm, the garden and the fireside. How it stirs up the memory of the past to utter these words; how our recollections flow back, quick as electric spark, to the old place, the *old home* where we passed our halcyon days.—We think of the fields and the woods where once we rambled in search of wild-flowers and wild fruits; where we chased the squirrel from the ears of ripening corn; and where, with rapt delight, we listened to the caroling of the birds, and zephyr's soothing voice. We think of the garden where we chased the butterflies, and ran races with the bees; of its beautiful flowers, the like of which we never see now-a-days. And we think of the fireside, that holy spot, where we all—father, mother, brothers, and sisters—used to assemble when the day's work was done, to read our little books, recount our little griefs, and listen to the words of admonition from lips now silent beneath the turf. Oh! that spot, the family fireside, is the holiest place on earth to us—the Meca to which every heart instinctively turns in its wanderings to and fro in this world of dire disappointments and sorrows.

Nor are these outflowings of the human heart to the homes and scenes of childhood to be suppressed. Nor is it a mark of weakness to recur, in memory's fond review, back to the holy associations that centre around the hearthstones where first we saw the light. It is but an expression of the divinity within us, a sign that all holy thoughts have not entirely forsaken our bosoms. They are thoughts to be cherished and valued: feelings that we should cultivate. That heart is not entirely lost to virtue, or incapable of reformation, that in all its wanderings and deviations from rectitude, still turns with fond recollection to the home and associations of its childhood.

This fact is pregnant with food for thought for the fathers and mothers of the rising generation.—Herein is a means, if no other existed, of saving our children from an utter alienation from all that is good, true and sacred. By throwing around the tender age of our children pleasant scenes and agreeable, though innocent, recreations and amusements, we imbue their plastic minds with a love of the beautiful, and a taste for the quiet and lovely scenes of home life, that no after vicissitudes or change of fortune will ever entirely eradicate from their memories. The man or woman whose child-days have been passed amid the surroundings of fruits, birds and flowers, of neatness, books and pictures, love,

order and quiet, will ever manifest a fondness for such scenes, and feel a longing aspiration to be the owner of a rural home—where this bent of the mind may be gratified in the care and training of plants and flowers, and the various etceteras that make up an agreeable and lovely home.

How important then, not only for ourselves, but for our children, that we make our homes pleasant. What a delightful retreat from the cares and turmoil of life is a neat little cottage, snugly hid away behind a wilderness of fruits and flowers, and where within we find neatness and order, books and pictures, smiling faces and loving hearts. O, who does not wish to have such a home? What is a home in the dusty town or the lordly hall compared to this? Others may laud the conveniences of the modern home; but for us we say, give us back the old farm-home, the rustic garden, and a seat by the fire made of logs cut from our native hills. Give us the scenes that cluster about the old farm, the garden, and the fireside.

B. W. J.

*Cottage Home, Surry, Va.*

### Saving Beef.

I send you a recipe for saving beef during the summer season, which I think is of vast importance to the South, as we can raise cattle with but little trouble, and by this process can save the largest ox midsummer for any length of time. I put up for my own family use one-quarter to one-half a beef weekly, and have not lost any in the past three months. I do not claim any thing for myself except the application, and my object is to give my experience to others that they may be benefitted.

*Recipe.*—For one hundred pounds of beef, take five pounds of fine salt, two ounces of saltpetre, and two pints of good molasses.

*Directions.*—Cut your beef in convenient pieces, taking out the marrow bones. Incorporate the salt and saltpetre together on a board or table. Take the beef, piece by piece, and rub the salt well into the flesh. Then have a cask of convenient size, prepared in the following manner: wash it well in the inside, then smoke it for ten or fifteen minutes with corn shocks or cobs, or anything that will make a dense smoke, (do not burn the cask,) let it cool for a few minutes, then put the beef in layers as close as possible, pouring the molasses over each layer. When all is thus placed in the cask, put a cover on the top with sufficient weight to keep the meat down, and in the course of six or ten hours the meat will be covered with brine. Use no water. When thus prepared, you can use it as steaks or roasts as you desire, as there is no more salt in it than will make it palatable.—*Cor. Rural South-Land.*

Woolen cloth was first made in England, 1341.



## AGRICULTURAL CHEMISTRY.---XII.

BY J. S. H. BARTLETT, M. D.

## OF THE GERMINATION OF SEEDS.

The various operations of nature which we see constantly going on around us, by the fact of their daily occurrence, fail to arrest our attention. But these ordinary operations, simple as they may seem to be to the casual observer, are based upon laws which are immutable. To those who are acquainted with these laws, many things are readily understood, which, to those not possessing the same knowledge, must remain more or less a matter of mystery.

In the case of the germination of seeds, by explaining the principles which govern this process, we will endeavor to make the subject clear to the general reader. Oxygen, heat and water, are almost the only agents in the act of germination. Pure water when imbibed by a seed, as a grain of wheat for instance, increases its volume, and facilitates the development of the germ. The first of these effects is entirely physical, and takes place in the dead, as well as in the lively seed. A grain of wheat deprived of its vital principles, by the action of water, disposed to putrefaction; while in one which is living, the fluid contributes to the development of a succession of new powers. There are some seeds that can germinate under water, but it is only through the quantity of air contained in that liquid that it then operates in assisting germination.

The development of the germ will not take place in water completely deprived of air. Seeds while germinating absorb oxygen, and surround themselves with an atmosphere of carbonic acid. If seeds are secluded from air and moisture while fresh and succulent, they putrefy; but if previously dried, they do not undergo this change, but preserve their power of germination till exposure to air and moisture calls it into action.

The activity of germination is proportioned to the degree of oxygen contained in the air. The larger seeds imbibe more of this gas than the smaller, hence the necessity that small seed should not be covered too deep. Seeds while germinating exhale only carbonic acid gas, and the volume of oxygen they consume is always equal to the volume of carbonic acid produced. These results have been ascertained by the experiments of de Saussure. It appears, then, that the only agent in germination is oxygen, the only product carbonic acid. The seeds part with a certain portion of carbon, and the oxygen combines with no other principle of the seed. Water appears to produce two effects in germination—in the first place, it penetrates the covering of the seed, to deposit within it the oxygen of the air which it holds in solution, in order to produce the

formation of the first portion of carbonic acid; and in the second, it opens a free access by which the air can enter the grain and act upon it in the manner already pointed out.

It follows, then, that germination cannot be well carried on unless atmospheric air has access to the seed, which cannot be the case if the seed be buried too deeply in the ground, or if it be sown in a compact soil, and too closely covered over. For this reason it is always urged upon the agriculturist that he should thoroughly prepare the soil by deep plowing, rolling, and by all other means requisite to bring it into a condition of fine tilth; so that the seed may "sprout" freely, and the younger plant have every facility of establishing itself firmly in the soil; for young plants like young animals never do so well after being checked in their growth in infancy. It likewise follows from these principles, that when the earth remains a long time covered with standing water, the seeds must decay; and also that a seed placed in dry earth, cannot germinate unless it be moistened. The impossibility of a seed germinating when too deeply buried in the ground, explains why we sometimes see, after deep tilling, plants making their appearance of the same kind as those which had been cultivated upon the soil several years before.

During the first stages of vegetation the feeble plant rejects those other aliments which, as it advances in strength, become the principal agent in its nutrition. Germination takes place in the same space of time in darkness as in light, but de Saussure has observed that after that process was completed, the development of plants was more rapid and perfect in the light than in darkness.

The following facts may then be deduced from what has been stated in reference to this process: first, that water or moisture swells the seed, and the oxygen combined in that subtracts from the seed carbon which is its principal constituent.

The swelling of the seed by moisture or water facilitates the introduction of atmospheric air into the interior of the grain, where its oxygen can combine more readily with the carbon for the formation of carbonic acid, which is disengaged under the form of a gas.

The heat necessary for germination facilitates the action of the oxygen and volatilization of the carbonic acid gas, at the same time that it excites the germ and stimulates its development.

The subtraction of a portion of their carbon, changes the state and the nature of the seeds. The mucilage and starch of which they are almost entirely composed, by parting with a portion of their carbon, pass to a state which is the first nourishment of the embryo plant.

As soon as the plant begins to unfold its leaves and to foster its roots in the earth, it is nourished by new aliments which it receives from the air and the soil by which it is surrounded. The organs which convey to the plant its new nourishment are principally its leaves and roots. The leaves absorb some of the gases contained in the air, and the roots draw in with the water the juices and salts which are mixed with the soil; and the gases are imbibed through the medium either of air or water.

Plants absorb carbonic acid from water and the air—in the light they decompose it, and assimilate the carbon and a part of the oxygen. The presence of carbonic acid is indispensable to vegetation, but the want of it is not equally great during all periods of the growth of the plants. A very young plant, of which the leaves and roots have just begun to be developed, languishes if watered with water containing this acid. When it has acquired some strength and size, its growth and vigor are increased by the operation. Sennebie has observed that young leaves decomposed from an equal volume of air during the same time, have less carbonic acid than leaves of full size. The effects produced by mold, and many other substances which are employed to promote vegetation, are in great part owing to the carbonic acid gas which they are continually transmitting directly to the plant by its roots, or throwing out into the atmosphere, whence it is imbibed by the leaves.

The power of absorbing carbonic acid and decomposing it, resides principally in the leaves; and the decomposition is very active when they are exposed to the sun, in which case they give out to the atmosphere a large quantity of oxygen combined with a little azote. Plants retain a small portion of the oxygen arising from the decomposition of carbonic acid and throw out the rest into the atmosphere.

**KEEPING APPLES.**—The *Germantown Telegraph*, tells a correspondent how he can keep his winter apples until late in spring, say to the end of May: There is but one answer to make: 1st, the apples must be good keepers, free from bruises or blemish. 2d, they must be spread out on shelves or packed in barrels, and kept in an atmosphere from forty to fifty degrees, better from forty to forty-five—that is at a temperature as equable as possible. Some cellars are just the thing and preserve them beautifully. Others are too moist. Where this is the case a few bushels of stone lime should be used.

A YOUNG gentleman having called in his physician, said, "Now, sir, I wish no more trifling. My desire is, that you at once strike at the root of my disease!" "It shall be done," replied the doctor; and lifting his cane, he mashed the decanter which stood on the table.

## THE WATER-POWER OF BALTIMORE.

Baltimore's peculiar plague of freshets and floods is but the price the city pays in kind for her great glory of water, and those attendant boons of beauty, comfort, health, convenience and thrift, wherein she is blessed beyond all thankfulness. Set upon hills, and begirt with heights pierced with a thousand ever-living springs, that cheer a hundred valleys, Baltimore derives from the *gradus* of ridges rising northward and westward from the Basin and Jones' disreputable flow, that characteristic network, at once so delightful and so useful, of bickering brooks, and brawling torrents, and silver cascades crooning pensively, which presently take shape and name—not always happily—in Jones' Falls, "Gwynn's Falls," the Great and Little "Gunpowder Falls," "Herring Run," the "Little Patuxent," and "Curtis Creek," besides the picturesque Patapsco, willful and romanic, as at Ellicott's Mills. These supply a water-power beyond all competition; no city of the Union can boast such wealth of falls and dams. As early as 1832 there were, within a circuit of fifteen miles around the city, forty-six flour mills, grinding the fine white wheat of Eastern Shore, besides many cotton and woolen factories, iron and copper and marble works and distilleries. In an article in the *North American Review*, General Harper demonstrated that in a semi-circle of twenty miles' radius, of which Baltimore is the centre, sufficient water-power is found to work a million of looms; and this enormous natural advantage is enhanced by the most complete facilities of transportation by rail and keel. In 1850, two million two hundred and seventy-five thousand bushels of wheat, and three million two hundred and fifty thousand bushels of corn were brought to the city and sold. Three hundred thousand barrels of flour were manufactured in the vicinity that year, and nine hundred thousand barrels were inspected. In 1865 nearly twelve million bushels of grain of all kinds were shipped to this market, and the annual inspection since that year has amounted to fully eleven hundred thousand barrels of flour, besides immense quantities of corn-meal. The flour mills in and around the city employ more capital than any other class of manufacturers, the city millers alone taking in a twelvemonth at least fifteen hundred thousand bushels of wheat. The cotton mills of Baltimore city and county consume annually over forty thousand bales; the business is eminently profitable, and by the inexhaustible water-power it can command is susceptible of enlargement to the full extent of supplying the Southern and Western demand for cotton goods. In whisky the annual sales reach four hundred thousand barrels, of which at least one-third is the product of the city distilleries.—*Lippincott's Magazine*.



## ESSAY.

READ BY COL. D. S. CURTIS, ON INVITATION, BEFORE  
THE POTOMAC FRUIT GROWER'S SOCIETY, AT WASH-  
INGTON, D. C., JULY 11, 1871.

Mr. President and Members of the Society:—*Association* is the genius of the age—the distinguishing feature of the times. All great enterprises—religious, moral or mercenary—adopt this great attractive principle, and without it none expect extended or permanent success.

*Association* is really the great fulcrum of all powerful movements, and the *Press* is the subtle lever by which they are moved. Artists and artisans—mechanics and merchants—all trades and professions have their unions and societies. These organizations are now as common as the works of their heads and hands—while all, to some extent, have peculiar means of *identity* and *fraternity*. All have their systematic organizations and combinations, for mutual protection and enjoyment, and into whose sacred circle none are admitted but members. All have embraced this effective operation *except* that great and important class which feeds and sustains all—the farmers and producers—upon whose labors and prosperity all other business depends for prosperity and support.

And if the farming community do not speedily arouse themselves and promptly adopt this great element of pecuniary and intellectual advancement, they will soon find themselves outstripped by all other callings of their more wise and fortunate brothers.

Besides, it is the duty, as well as privilege of that responsible class which feeds all, and upon which all depend, that they should use all means and avail themselves of every facility for rendering them as effective and powerful as possible. Being the basis and support of all it is the duty and privilege of the farmer to take the lead of all in the march of intelligence, prosperity and enjoyment. And this *can* be done by *association* only.

The peculiar character of the farmers' business renders them more isolated, and more widely spread in their communities than are other professions; and in consequence of this sparse nature of their settlement they are less social, and, of course, enjoy less of joyous and instructive conversation and comparing of notes, which is so conducive of knowledge and intelligence.

"The isolation of families, occasioned by the sparse settlement of farming districts, has been not only a personal hardship, but a bar to material progress. Dull and hopeless monotony on isolated farms has driven many a bright boy from the farm-home, and deprived agriculture of much needed intelligence; but more unfortunate still has been that inertia and torpidity engendered by solitude, rendering the farm inimical to reform, however advantageous. Often beyond the reach of his nearest neighbor, visiting the village but once a week, the farmer has been secluded from communion with his kind; and, thus cut off from the current of progress, his life's business was left for generations among the most backward of industries, his children growing up to follow his steps, as he followed his father's and grandfather's before him."

Happily, this is not *now* so much the case as it was when some of us were boys, and even before some others of you were born. The great improvements of the age, in mechanism, intelligence and

facilities for transit, have much ameliorated this condition.

Here is one significant central fact that we will do well to look at in the outset, which is the very *small representation and influence* that farmers have in our legislative halls—national and State. At the organization of the last session of Congress there were present two hundred and nineteen members; and how many of these do you suppose were farmers, to represent this great, peculiarly farming nation? In that body there were one hundred and thirty-four lawyers, eleven farmers, and sixty-four of all other classes. Yes, in two hundred and nineteen members of Congress there were one hundred and thirty-four lawyers, and only eleven farmers—not one-twentieth of the representation from that class which produces all and feeds all, and which outnumbers any other class in the nation. Is it any wonder then that so little legislation is enacted for the benefit of agriculture, and so much for commercial and legal professions? Is it any wonder there is so much law that even the well-read can scarcely understand?—laws framed and worded purposely to require the services of lawyers, and to sustain their professions, and for which the producing laboring classes must pay? And this will be so just so long as farmers refuse to unite for their common knowledge, influence and elevation.

Even the standing Committee on Agriculture, in both Houses of Congress, show an equally meagre representation of farmers. For instance:

*Senate Committee.*—Simon Cameron, of Pennsylvania, a politician; Thomas J. Robertson, of South Carolina, doctor and planter; Thomas W. Tipton, of Nebraska, lawyer and preacher; Abijah Gilbert, of Florida, a merchant; Thomas C. McCreery, of Kentucky, a lawyer and planter.

*House Committee.*—John T. Wilson of Ohio, a merchant and farmer; William Loughridge, of Iowa, a lawyer; John Fisher, of New York, a merchant and iron manufacturer; William J. Smith, of Tennessee, a painter and horticulturist; David P. Dyer, of Missouri, a lawyer; Jacob Benton of New Hampshire, a lawyer; John M. Crebbs, of Illinois, lawyer; Samuel B. Axtell, of California, a lawyer; Henry A. Reeves, of New York, studied law, and an editor.

While visiting the great agricultural States, Pennsylvania and Ohio, last winter—I had access to lists of the members of the Legislatures of those States, and found that an equally small proportion were farmers—though farming is the chief business.

Now I do not insist that farmers shall become politicians, but they ought to study the policy of the nation, and elect a number of their own profession, equal in proportion to their number of voters, and the vast and vital importance of their business, if they expect equal justice in the laws, to be properly protected by government. Therefore, as all other callings and professions adopt this potent and magic influence to advance their interests, farmers must do the same, or they will soon find themselves fatally falling behind all others in the march of improvement and scientific progress which distinguishes our age.

Their union in association will greatly aid them in procuring information and education on all topics useful to them, and by it they will be, in a large degree, better able to take advantage of the markets, and control the prices of their own products, which are now almost entirely dictated to them by brokers and speculators. It will also largely afford them

the power and facilities for making their just rights and influence better known and more properly felt and regarded in legislation and elections. It will make them better acquainted with one another, with each other's views, and lead to harmonious co-operation. \*

Members thus associated for their common good meet in their mystic circles, in complete confidence, on a common plane of safety, fearing no *shams* or *impositions*—for common interest and fraternal regard—leaves no motive to deceive any among themselves, while they are protected and guarded against imposters without, thus enhancing business facilities and social enjoyments.

Too constant confinement at home and the farm, and the absence of frequent commingling with our fellow-beings in social intercourse, is liable to dwarf the mind, and contract the spirit of enterprise; while frequent and systematic association with our kind will expand the intellect, elevate its aims, and give wholesome breadth to ambition; inciting emulation and friendly competition, by widening the range of thought and investigation in all the sphere of our operations. Such, in brief, would be some of the effects of proper association among farmers, if they were organized in some fraternal and systematic order, which should be uniform throughout the country and world, and mutually understood by all.

With minds as great, and purposes as honorable as any, all that farmers now need to raise themselves to a commanding position of power and influence, inferior to none, superior to all, is harmonious organization and concert of action; and by it they would speedily rise to a degree of knowledge and efficiency commensurate with the vast importance of their calling.

Intelligence should be the basis of all association, as it should be the chief motive of all enterprises; only by it can the command to possess and subdue the world and enjoy it, be complied with; by intelligent thought, actively developed in works, are the elements of nature understood and subdued, and applied for our use and profit.

Such an association, such an order has been established, and is in beautiful operation in many of the States of the Union; from which the farmers and producers belonging to it are already signally realizing the benefits of it, not enjoyed by those not members. This Order is based on wide, firm, scientific principles. It is styled the *Patrons of Husbandry*. A number of intelligent, philanthropic, thinking gentlemen—of this country and Europe—producers of thorough experience, assembled in this city several years ago, after long and careful deliberation, devised the plan, and prepared the ritual and constitution of this order, to meet the wants of all classes of farmers and horticulturists, and furnish them with the greatly needed facilities for protection against the schemes and operations of sharpers and speculators. That devoted body of men spent many anxious and thoughtful days in this noble labor of love and science.

The forms of the Order consist in a National Grange, established here at Washington, the National Capital, with provisions for State granges in all of the States, and subordinate granges in counties and towns, wherever the producers may choose to organize them. Its society consists in membership of all who are engaged or interested in the prosperity and elevation of agriculture, as farming,

gardening, horticulture and stock-raising, &c., and comprising parents of *both sexes*, with their children—thus embracing the *entire family*, as all its members are alike interested in its welfare and highest culture and happiness—requiring the fraternal pledge of all, to truth, honor and fidelity to each other and the order, with secret or confidential means of recognition and admission into the granges or lodges. Such are the form and construction of the order. The motives and details of its business are to collect information, impart instruction, enlarge the social intercourse, and secure protection and sufficient co-operation for the common good. Partizan politics are disclaimed by the order, and partizan discussions excluded from the granges—members being free to vote for such candidates and parties as they may choose and believe will best promote the highest welfare of the country and its producers.

The highest and most beautiful effects to be produced by this systematic association among farmers would be social and intellectual improvements and enjoyments for both sexes.

To a large extent, the men who make the laws control the liberty and prosperity of the people; hence it is of the highest importance that the producing classes should look well to it who are elected to make their laws. In association there is power, as in knowledge; in familiar and frequent discussions they are enabled not only to determine who is suitable and what is wanted, but also to better qualify themselves and secure wise selections. Discussion and comparing views will elicit truth and correct error, better than eloquent lectures and studied essays, by prompting inquiry and reply, bringing out the united experience and ideas of the many, to be criticized and tested by the inspection and observation of all. And this is the regular practical result of proceedings in the granges of the *Patrons*. And it is a rapidly growing order—its numbers continually increasing in different States—and it must speedily become a controlling power in the land, elevating the producers and controlling the markets for benefit alike of producers and consumers; so that, instead of being victims and a subordinate class, farmers will be *first* in dignity and power, as they already are most essential and important.

But to effect this they must have a livelier regard for the useful library than for the costly parlor; they must be more willing to make liberal expenditures for books and papers than for tawdry and fashion. Let every one to whom the query is applicable answer to himself, how many are there who expend hundreds of dollars to ornament the parlor, while hardly ten dollars are expended for practical and scientific books to enlighten and aid yourselves and families in prosecuting your business?

The influence exerted in the Granges of *Patrons* is calculated to improve its members, very happily, in this direction; and such is the design, and will be the practical results, of association with the order, on the honest, industrious producers of the country, wherever they unite with the order.

Then, as is just and appropriate, will the *Feeders* of the nation bear rule over the land—with the *plow*, and not the sword; then will all the people, in peace and plenty, honor *Husbandry*, and with joy and gladness bless all its *Patrons*—when *wisdom* will rule the heads and direct the hands, as *charity* will warm the hearts and control the will of men and women.



## SURFACE MANURING.

Shall we Top-Dress Often and Light, or Less Often and Heavy?

In the main, and almost always, it is best to apply our manure often. The difference in the labor is but a trifle. A thin coat will be held by the soil better than a heavy one; the manure is brought more directly in contact with the ground, and thus loses less of its strength. This is a good way to apply on meadows, especially newly sown. There will be no smothering of the tender plants; all will feel immediately the new stimulus, and grow right along without impediment. It is an excellent way to treat young meadows that are not over rich.—Apply a rich, fine, thoroughly rotted manure or compost, and nothing perhaps can be better. After that, a repetition every second or third year will show wonders; the wonder will be increased in the case of compost, which makes soil and invites the roots into it, thus thickening the sod and strengthening the growth. Other fertilizers besides manure may also be used; plaster will hardly be dispensed with.

Here a sod is built up, and the land raised towards its original level, which cultivation had lowered—a sod that, whether the land was originally poor or not, is of more worth than is usually supposed, making from 60 to 70 or more loads of the best of manure to turn down; or the land may be continued to grass, either meadow or pasture, and continue to yield largely—to yield largely because the old applications of manure, especially the recent, have not lost all their effect, (there are always some of the less soluble parts that hold out,) and the new have of course their new stimulus, and a full effect of that.

Thin coating has also another advantage; it may be used where manure is scarce, less having a greater effect in proportion than more, being used (by the plant) *all* of it and *at once*, with the slight exception mentioned. We can thus make a little manure go further and answer a good purpose, working it, little as it is, close to the ground; it will tell there faithfully and smartly.

Another advantage in applying these thin coats is the less labor they induce when they are used on plowed ground and harrowed in with grain, especially in the spring when work generally is crowding; this is of considerable importance. Of course where land is plowed in the fall or winter the manure may be applied with more leisure. But land plowed in the spring and needing manure is favored by the less labor of a thin coat. It may be said apply before plowing. This may be done and is done quite frequently. But the manure is lost almost for that season, and much of it gone for the

next. The practice of the day—the good practice—is against it. If you want to get the full effect, or nearly, of your thin coat (and you need it) by all means apply on the furrow and as evenly as possible, mixing as well as can be, so that the grain (and the seeding if there is any) will feel at once the effect of the contact. Afterward (if stocked down) you may apply more at your leisure. A thin coat may be applied the oftener, thus disposing of the manure more as it is made, and longer and greener manure may be used. There are still more advantages.

But there are also advantages with a heavy coat. It answers as a mulch, protecting both in winter and summer. It is an advantage—rather a necessity—to apply it on quite poor land, land very much run down or originally with little fertility. A good coat of manure is needed to produce a good crop on such land, and it should in such cases be applied in the fall or winter, so that the strength gets worked down by the elements, making a nice seed bed in the spring. But it may be applied in the spring if fine or well rotted and well harrowed in. Fall or winter, however, is the best; it also dispenses with the crowd of labor in the spring. Immediate crops then from poor land require heavy manuring, and if done properly will at once get the benefit.

Where manure *will* be plowed in, a heavy coat is an advantage (in point of profit or saving) over a thin one. A thin coat is in general thrown on the subsoil, where it is mostly lost. A heavy coat goes there but in part, especially if the manure is not thoroughly rotten, as the plow will not cover it so deeply, some showing on the top, and being more scattered through the soil. The roots will be sure to get into it and get much of its strength. But on the surface, this coat, heavy as it is, mixed with the soil at sowing, will give more benefit, show better growth; the soil will hold the strength from escaping, and each rain will saturate the land with its strength. A poor soil will thus be benefitted at once and made a good soil, whether the manure is plowed in or applied on the surface. Of course leachy land is excepted in plowing in.

It is not then so economical, so beneficial, in general, to manure heavy at a time, but rather sparingly and often. This on a fair soil not too much impoverished, for such a soil with a moderate quantity of good, rich manure, will yield largely and change largely the manure into the product wanted, thus getting the benefit of the application at once, what is wanted. The roots are pretty sure to take up *all*, or nearly all, the strength of the application as it passes into the soil and gradually down with the roots till absorbed by them.

We have tried fresh manure with all the strength in it on yellow ridges where the soil was light and

yielded little. We applied it broad-cast and even but thin, working it well among the roots of the impoverished grass, and the result was a wonder, a heavy crop lodging. A heavier coat could have done but little better, and if quite heavy probably not so well. The full effect of the thin application was had. Other fertilizers may be alternated with these light dressings with advantage.—F. G. in *Country Gentleman*.

### TO DESTROY THE CANADA THISTLE.

Some days ago, says the *Germantown Telegraph*, we received an inquiry (mislaidd) as to the best means to get rid of the Canada thistle. We have printed a great deal within the last ten years on this subject, from our own experience and the experience of others. In regions where the pestiferous weed abounds by square miles and almost forces farmers to abandon the cultivation of the land altogether, they adopt no other mode to destroy it than mowing in August. This of course diminishes the natural increase of the growth somewhat the following season; but that is all. Next year the thistle appears again at least as abundant as ever—and so the evil is permitted to go on year after year.

Frequent cultivation of the land has a good effect in lessening the growth; and thus we noticed that in "hoed crops"—that is, in corn, potatoes, &c—it was much less abundant. But we could not see that there was any general or systematic effort anywhere made for its thorough eradication. Farmers seemed, indeed, to view it as a thing not to be got rid of. If otherwise, how was it to be done? They do nothing beside mowing, and that sparingly enough. They say it's no use. This is an easy way for lazy people to dispose of any question requiring labor which does not appear to bring money immediately into their pockets. Even in this view our readers will scarcely believe us when we say that their barnyards are full of thistles, and that it is to be seen perfectly at home, in the *door-yards*, among the *rose-bushes*, *hollyhocks*, &c.

The best way to destroy the thistle, in patches and fields, is by the *copious application of salt*. If before a rain the stalks are cut off close to the ground and salt poured into the cavities, it will be sure to destroy them. But even a heavy dose of salt, applied about or nearly in the same proportion as upon the asparagus bed, before a rain, it will do the work thoroughly. But mind there must be no sparing of the salt. No mere sprinkling. The ground must be covered. It will of course kill everything else for that season, but it will hardly be perceptible the following season, and will actually pay as a fertilizer.

Spectacles were invented by an Italian in 1240.

### HARNESSING HORSES CORRECTLY.

When harnessed correctly, a strong horse is a powerful animal; but by an imperfect adjustment of the gearing, many strong teams are shorn of half their strength; and many are often worried more by an improper fit of the harness, or by a decidedly bad attachment to the vehicle they are drawing, than by all the service they perform. But few teamsters have ever been taught how to harness a horse correctly; and fewer still have learned that there is a right way and a wrong way to hitch a team to a carriage. When a harness is taken from the shop, every part should be adjusted to fit the horse that is to wear it.

*Back-Band*.—The back band should be let out or buckled up, until it will be neither too long nor too short when the animal is drawing a load. Many a good horse has had a large sore made on his back simply because the back-band of the harness was buckled up too far.

*Breeching*.—The breeching should also be adjusted properly, so that the horse will not seem like a man in a boy's cart, nor like a colt wearing the harness of a full-grown horse.

*Collar*.—The collar should fit as neatly to the animal's neck as an easy pair of shoes set on one's feet. The collar should never be so long that a man can thrust his arm easily between the neck of the animal and the lower end of the collar. Many horses—especially old ones—when thin in flesh, require collars so small that they cannot be put over the heads of the horses that wear them. It is of eminent importance that the proprietors of teams should see to such minor points; and provide collars that are open at the top or bottom. Every horse should have his own collar and harness as much as every man his own boots and coat.

*Lines*.—The lines are often adjusted in such a manner, that the heads of both horses are hauled away from each other so far that the team cannot travel easily. At other times their heads are drawn too far inward, toward each other. The lines should be adjusted so that the heads may be held just as far apart as the length of the double whiffletree.

*Pole*.—When a team is attached to a carriage, or lumber wagon, the breast-straps, stay-chains or neck-yoke should be so adjusted that the pole or tongue cannot strike either horse. The tongue is often allowed to have so much play that it whangs the arms or shoulders of the team with terrible force, when the vehicle is being drawn over rough ways. The neck-yoke straps, or tongue-chains, should be drawn up so as to elevate the tongue between the shoulders, where the lateral jerking or thrusting will be received by the gearing on the necks of the animals, rather than against the unprotected arms or shoulders of the team.—S. E. Todd.



## LIME AS A FERTILIZER.

Manures may be classed under three principal heads: first, those which supply some essential element to the plant; second, those which act as mere stimulants; and lastly, those which do not act directly on the plant, but act on substances already in the soil, rendering them more suitable for plant life. Lime belongs to this last class almost entirely, as there are very few soils that do not contain sufficient lime for any direct demands that plants are likely to make on them.

In order that a plant may feed on the inorganic matter in the soil, or, indeed, on any matter, it must be brought into a soluble state. Plants feed only on liquids and gases; they have no power of assimilating solid food.

The inorganic portions of plants are built up chiefly of potash, soda, lime, magnesia, combined with silicic, sulphuric, phosphoric and hydro-chloric acids, as well as with many organic acids. The carbonates, so generally found in the ashes of plants, rarely exist in the plants themselves, being mostly formed from salts of organic acids during the process of burning. A small portion of the above-mentioned bases already exist in the soil in a soluble state, but are much more abundant in the insoluble condition.

If, however, we add caustic lime to a soil, it renders these insoluble substances soluble, and prepares them for the use of the plant.

All soils formed from the decomposition of granite contain an abundance of potassa and silica, the most important elements for the growth of the wheat plants. But these two elements are combined with each other, and with alumina, in the form of feldspar, which is almost perfectly insoluble. Caustic lime breaks up this combination; and accordingly, when the farmer finds that his wheat straw is getting too feeble to support its own weight, he applies lime to the soil, with the immediate effect of stiffening up the straw. Fifty or sixty years ago, the farms in New York, Pennsylvania and Virginia had almost run down, and were not considered worth fencing. These were called "old fields;" and such may still be found in abundance through Maryland and Virginia. They had been cropped through consecutive years with the same plants, until they would no longer yield enough to pay for the trouble. In some parts of Pennsylvania lime is abundant, and upon applying it to the worn-out soils the effect was remarkable. Farms that thirty or forty years ago could almost have been had for the asking, are now known as being among the best in the State.

But it is not on the inorganic portion of the soil alone that lime acts. It bears, perhaps, an even

more important relation to the organic portion of the soil. In Norway and Sweden, every farmer has to pay a portion of his tax to the government in saltpetre. In order to prepare this, he heaps together old mortar or lime, manure, ashes and earth, and keeps the heap moist. The lime and the nitrogenous matter of the manure react on each other, and form nitrate and carbonate of lime. Nitrate of lime is decomposed by the carbonate of potassa from the wood ashes, and saltpetre is thus formed. Precisely the same kind of reaction is going on continually in the soil when we apply lime to it; and thus the nitrogen of the decaying vegetable matter is brought into fit condition for the use of plants. For all these uses the more caustic the lime is, the better for the land. A heap of lime that has been long exposed to air and rain is much less valuable than that which is freshly slacked, as it has absorbed carbonic acid from the air. Carbonate of lime is of but little value as a manure, although, when it is finely divided, as when it is in the state of chalk, it may serve to neutralize the vegetable acids that exist in some wet lands. It is undoubtedly better to apply lime directly to the soil than to make a compost of it, with peat, or such substances, for we do not gain enough by the mixing to pay for the expense of the manipulation. We have been frequently asked how much lime should be applied to the acre. This is a very difficult question to answer, unless we know all about the soil to which it is to be applied. What would be an excessive quantity for some lands is too little for others. In some sections, or upon some lands, one hundred bushels to the acre may be applied with beneficial results; in others, fifty or sixty bushels are an abundance, while some lands will not bear more than twenty or thirty.

Lime should never be applied directly in association with manure, as it tends to drive off the ammonia and thus lower its value. If we wish to apply it to corn or wheat land, it is best, perhaps, to top-dress the sod the year before we intend to plough. The manure may be then applied, and ploughed under in the spring, without much danger of loss, as the lime has been doing its work during the winter.—*Boston Journal of Chemistry.*

FOR JAPAN.—Hon. Horace Capron took leave of the employes of the Department of Agriculture on the 13th of July, and sailed from San Francisco for Japan the 1st day of August. He is accompanied by Dr. Thomas Antisell, of Washington, as chemist, mineralogist, and geologist; Major A. G. Warfield, of Baltimore, engineer, who will examine Japan with reference to the location of railroads; and Dr. Stuart Eldridge, of Washington, secretary to the commission.

## HOW TO BUILD ICE-HOUSES.

W. F. H. communicates to the *Technologist* the following directions for constructing an ice-house:

An ice-house, he says, may be economically built in the following manner, and will give entire satisfaction, if the dimensions be not less than twelve feet square by twelve feet high for the space to contain the ice. Presuming that the ice-house is only for family use, select a shady position and dig a cellar two feet deep, and let the floor or bottom be properly smoothed off with a descent of eighteen inches in the twelve feet, leading to one corner. It should be made perfectly water-tight and smooth with a coating of cement; and a wall, also laid in cement, should be erected therein three feet high, formed on the top with a rabbet on the inner edge of two sides, for the purpose of receiving the joists for the inner lining of the house; make the size any way you please, only not less than twelve feet square inside; erect on this wall your double frame, carefully boarded with tongue-and-groove boards on the inside, and make as tight as possible. Pack the space between the inner and outer lining with dry sawdust or tan bark up to the beginning of the roof; let the roof be steep, and also lined inside with boards, but not filled, and let a space under the peak be left open three inches to conduct the warm air to a ventilator on either side of the peak, secured by wide slats in such a position as to make ingress of rain impossible. Another ventilator must be placed in the center of the peak, the openings of which must be larger in proportion to the house (say one foot square inside), and entirely secured against rain. Let the door for filling and taking out be on the north side of the gable, arranged like the roof, not filled, and a drain pipe of three to four inches, properly cemented, run from the lowest point of the bottom of the pit at least ten feet (fifteen feet is better) under ground, with a good descent for taking off the water, and your house is ready to receive the ice, and it will keep it well for all purposes. The filling of the house should be done in this manner: Place, at the bottom of said pit, clean corn stalks, eighteen inches deep, closely packed and leveled; then cut your ice in square blocks, as even square as practicable, and place them on the corn stalks close together, like tiles in a hall; and when six layers are completed, take a watering pot with a middling fine nose, and pour clean water gently over all crevices left, until they are closed by the freezing of said water; continue then the filling, repeating at intervals the watering process until you reach the beginning of the roof; then let the ice settle, and, if you find that the crevices have not been completely frozen, choose a very cold day to finish

the watering operation. You can then put in ice enough to go half way to the peak, and you can enjoy the luxury of ice until the new crop. To make the handling of the ice easy, have a beam extending three feet from the roof outside for block and tackle, and another one inside near the peak for the same purpose; also fix an easy ladder on the inner wall on the side where the door is, and the ice can be nicely removed with the tackle and ice tongs without any trouble. When taking the ice some distance from the house, it would be advisable to use a blanket to put it in while it is being transported, which blanket should always be kept aired, and should be cleaned every time it is used. Such a building should be painted from time to time on the outside; and, whenever the ice is finished, the cornstalks should be removed and the house well ventilated, so as to be free from any unpleasant odors. If so cared for, it will last a great many years, and will require very few repairs.

## FARMING IN SOUTHERN MARYLAND.

*Eds. Country Gentleman*—Your correspondent Jno. H. Dent, p. 436, considers the trouble with southern farmers, too much land and too shallow plowing; but I wish to ask him, is it not quite as much, too little stock? The description of Georgia practice in his article is quite as applicable here in Southern Maryland, within 60 miles of the great city of Baltimore, where the old residents confine their attention to tobacco, corn and wheat, keeping only their teams, a very few cows and even fewer sheep, and letting *them* suffer every winter for want of the hay which was never cut, as they considered it little short of ruin to stock with grass. A northern farmer asked one—"Will clover grow here at all?" "Indeed it will if you let it," said he.—"I've spent my life fighting it, and too many have succeeded, bringing their land to the condition of 'old fields' which they will sell even as low as \$5 per acre, while butter is quoted in Baltimore markets as New York for the highest prices, and fat lambs, veal, beef, &c., are almost unobtainable."

It seems to me that one necessary to the reconstruction of farming in these southern counties, is to change all this—is not only to plow deeper and cultivate better, but to keep all the stock the farmer can feed well; depend upon their products for sales, instead of selling the crops directly off the lands.

The climate here is so mild, that the English system of sheep feeding which involves extensive turnip culture, might be easily adopted, while the greater dryness of the air and soil conduces to much greater hardness of constitution in the flocks. Experiments have been tried on rather a large scale, which go to show that the turnip does as well here as in England, and that it can be fed in the field nearly the whole winter, and there seems no reason why it cannot be made the means of as great improvement here as it has been there. E. F. H.



## THE HYACINTH.

The Hyacinth is one of the finest winter and spring flowering bulbs. It is of very easy culture and can be grown with equal success in earth, sand, moss or water. Being adapted to grow in vases, bowls, dishes, shells, wire-work or anything which will contain a few handfuls of earth or moss, the most ornamental objects for the house can thus be formed. For planting out of doors, in beds or borders, it is unsurpassed by any plant. Blossoming as it does at a season when there are few flowers, its beauty and fragrance are doubly appreciated.

*Soil.*—For ordinary purposes, any good garden soil containing a mixture of sand and manure will answer. Where large growth and bloom are desirable a mixture composed of equal parts of loam, leaf mould, sand and well rotted manure is the most suitable.

*Planting in Beds or Borders.*—Prepare the soil well, according to the directions above. Plant the bulbs two or three inches deep, according to size. In round beds plant the bulbs about six inches apart in lines one foot apart, each line being of the same variety or color. A still more effective bed may be made by planting two or three lines or rows of the same color. A mixture of colors produces little or no effect. Place a little dry sand around each bulb to prevent rot. As soon as frosty weather commences, the beds should be covered with leaves and remain so till the ground thaws in spring.

*In Pots.*—Pot in well prepared soil from the first of September till the first of November, placing the bulb so that its point will be on a level with the top of the pot and just above the soil. To secure a succession of bloom, some may be potted weekly during that time. After potting, place in a cool cellar or dark frame until well rooted. The bulbs can be gradually forced into bloom by placing them in a cool room—say with a temperature not above 65° or 70°. Give plenty of air and light, and keep the soil moist. They will never succeed in a hot room. After blooming, the bulbs should be allowed to dry and rest.

*In Water.*—Select good bulbs of choice single varieties early in November, and put in glasses so that the bottom of the bulb just touches the water, (rain water.) Place in a cool, dark room or closet, and allow them to remain there till the roots have reached the bottom of the glass. Then give them light gradually and treat the same as those grown in pots—taking care to change the water when it becomes discolored.

*In Sand or Moss.*—For drainage, place a small quantity of powdered charcoal in the bottom of the vessel to be planted. Upon this put the moss or

sand and plant the bulbs in it. Immerse the vessel in water to settle the sand or moisten the moss.—Keep in a dark place for two or three weeks. Then treat the same as Hyacinths in pots.

*Taking up and Preserving.*—When the foliage turns yellow take up the roots, cut off the stem and leaves and place the bulbs in an airy room for two weeks to dry—then wrap each bulb carefully in paper, or put in sand, as the air is injurious to them.—*Ellwanger & Barry's Catalogue for 1871.*

## The Best Market Pears.

If a farmer were to say to us that he was about to plant twenty-five pear trees for profit—that is for market purposes—and that he desired a suggestion as to the varieties and number of each variety he should set out, we would have no hesitation in giving him the following list: Two Early Catharine, two Giffard, four summer Julia, five Manning's Elizabeth, three Bartlett, five Seckel, and four Lawrence. These ripen in the order they are placed.

It appears that these varieties do well everywhere, and are therefore particularly adapted to general cultivation. They are very productive, the trees hardy and vigorous in their growth, and the fruit generally perfect. The Early Catharine and Seckel are not early bearers, but when they once commence they seldom fail in giving an abundant crop.

In purchasing the trees be careful to select good specimens; have them taken up with all the roots possible; transplant with every attention; stake firmly placing the stakes at an angle, with the head to the north-east; keep the ground stirred two or three feet from the stem all around; and allow no cattle to disturb them.—*Ed., Germantown Telegraph.*

## How to Keep Cider.

Mr. E. Williams, in the *Journal of the Farm*, gives the following on cider keeping:

I am aware that there are as many recipes for keeping cider as for curing colds or rheumatism. Some of them doubtless are good, but most of them are worthless. Here is one which I have found to answer the purpose admirably, and as your readers will observe, is a very simple one.

I allow the cider, after it comes from the press, to stand until the pumice settles. When this point is reached, I put it in a clear vessel, and let it come to a boil, skimming off the scum carefully. It is then put into kegs or demijohns, and tightly corked and sealed. By this process I have excellent sweet cider, not merely for the entire winter, but for years. This method would not of course be available where large quantities are made, but for an ordinary family it answers admirably.

### The Earth Cure.

We hear of numerous cases where the foot and mouth disease has been successfully treated by simply allowing the affected animals to stand in moist earth up to the ankles. A letter from J. P. Swain, which is published in the *Practical Farmer*, says: "Nearly seventy years ago I was introduced to good old mother Earth, and I have always loved her dearly, and regret exceedingly that I am not better acquainted with her, and have not used her more freely. Instantly on seeing the disease, I commenced carting earth into my yards, and have given my cattle muddy water to drink, (not filthy water,) and let them stand in muddy water and lie on soft earth, where they could bury their feet. In my stupidity I let some of my cattle stand on dry board floors. One of them suffered severely in its feet. When I came to myself, and gave it a chance to find a place where it could lie and half bury its feet, it did not require much sagacity on my part to take a spade and bury its feet. I have no occasion to use any wash for the mouths, but have rubbed their mouths with fine salt, after the blisters began to break, with good effect. If I had occasion to use a wash, I should use permanganate of potash in preference to anything else.

"I do not think there is any canker connected with this disease; the blisters do not enlarge or even eat. About the hoofs there is nothing of the character of the 'hoof ail,' which requires a strong acid or caustic before it will heal. Thanks to an attentive herdsman, and especially to mother Earth, and Him who made her, I have not suffered from the disease, and our country need not."

### The Trophy Tomato.

The editor of the *Germantown Telegraph* is not an admirer of the much praised trophy tomato. Hear him:

"Well, what about it? Is there anything special in it? If so point it out. The enormous amount of paid puffing it has received, no doubt was very profitable to those who pocketed the absurd prices at which they, through the aid of an accommodating press, obtained for it. But wherein it possesses any special merit we have never discovered. It is no better than the varieties we have been cultivating, and not equal to some of them. In some quarters it is soundly denounced as mean, small, late, and only ripens one-half the specimens. Those that we have eaten, some as early as two years ago, possessed no quality not possessed by others. We were sent some twenty seed as a present from somebody, when *five dollars* were demanded for them, and our appreciation of the kindness did not extend far enough to plant them. The Feeje and Cook's Favorite are good enough for us until we can get better, but that has yet to be done. Our crop this year is the most perfect and abundant we ever raised. The vines are a mass of fruit, and this without 'pinching,' only slashing off the most rampant branches."

### LETTERS OF RECOMMENDATION.

A gentleman advertised for a boy to assist him in his office, and nearly fifty applicants presented themselves to him. Out of the whole number he in a short time selected one, and dismissed the rest.

"I should like to know," said a friend, "on what ground you selected that boy, who brought not a single recommendation."

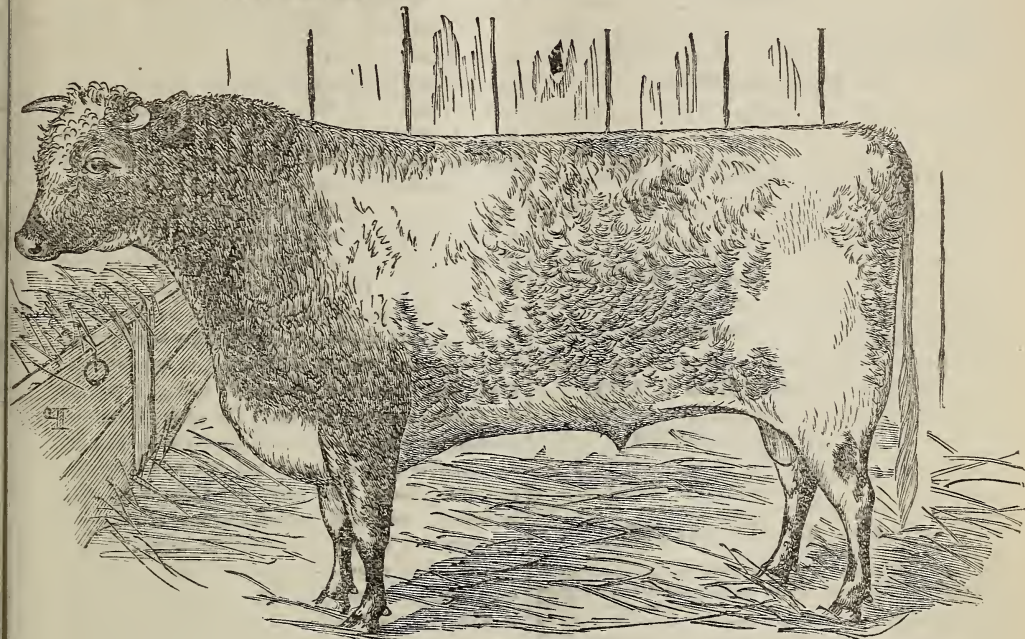
"You are mistaken," said the gentleman; "he had a great many. He wiped his feet when he came in, and closed the door after him, showing that he was careful. He gave up his seat instantly to that lame, old man, showing he was kind and thoughtful. He took off his cap when he came in, and answered my questions promptly and respectfully, showing he was polite and gentlemanly. He picked up the book which I had purposely laid upon the floor, and replaced it on the table, while all the rest stepped over it or shoved it aside; and he waited quietly for his turn, instead of pushing and crowding, showing that he was honest and orderly. When I talked with him, I noticed that his clothes were carefully brushed, his hair in nice order, and his teeth as white as milk; and when he wrote his name, I noticed that his finger nails were clean, instead of being tipped with jet, like that handsome little fellow's, in the blue jacket. Don't you call those things letters of recommendation? I do, and I would give more for what I can tell about a boy by using my eyes ten minutes, than all the fine letters he can bring me."—*Little Corporal*

### Watering Horses.

On the subject of watering teams, Mr. Joseph Harris, an agricultural writer, advocates frequent watering of work horses, as a renewer of the vigor of the animals. We disagree with him. We think both man and beast are generally watered too much. Men and horses at hard work in warm weather perspire just in proportion to the quantity of fluids taken into the stomach. Frequent drinking in hot weather, according to our experience, emasculates instead of refreshes. Some years ago, being at Cape Island, in driving out in one of the stand-coaches of the place, on a very hot day, we asked the driver how it was that his horses perspired so little, while the horses of private carriages, going at a slower speed, were covered with foam. He replied that he watered his horses three times a day only, though he sponged their mouths frequently; while the private drivers watered their horses whenever they stopped. He said, and it seemed to us as very sensible, that the frequent watering of horses effected no good purpose, while it made them very uncomfortable and lethargic. Horses, no matter what their work was, did not need watering oftener than three times a day. Our own experience, with horses all our life, is to the same effect.—*Germantown Telegraph*.



## SIXTH EARL OF OXFORD. AT 19 MONTHS.



Sixth Earl of Oxford, 9934. Bred by James O. Sheldon, Geneva, N. Y. Roan; calved August 3d, 1869. Got by 5 h Duke of Geneva, 7932 The property of CHARLES E. COFFIN, Muirkirk, Md.

## Ice Houses and Storing Ice.

E. E. Jones, of Cove, Pa., gives the *American Farm Journal* the following mode of building an ice house and storing it:

Build a house 10x15 feet, of plank or boards; nail the stuff up and down; cover with boards; make the door eight or ten feet from the ground. Line with light boards, leaving a space between the outside and inside (lining) of about twelve inches; fill this with tan bark, wet, well pounded in. Then cut a small ditch inside close to the boards; cover with boards all around, leading to the outside.—Keep all water from standing around the building. Place the building on north side of some large one if convenient.

*Storing Ice.*—Put eight or ten inches of sawdust or bark in the bottom; cut the ice square and place close together, leaving about six inches space from wall all around; then pack this full of bark or sawdust; then pour cold water on top in the cracks, and the layers will become solid. Then put on the second layer, and so on till you have eight or ten feet of ice. Then cover with bark two feet deep.

I will warrant that you will have ice the year round. Two or three farmers could build together a larger building on the same plan. I always have plenty of ice while my neighbors are out, for they think only shell will keep ice.

## THE FOUR GEORGIA FAIRS.

The Directors of the four principal fairs of this State have consulted the convenience and economy of exhibitors and visitors, and have so arranged the time of their exhibitions, that they can attend each one and that without the loss of time or any unnecessary expense of traveling over the same road twice. This arrangement will be duly appreciated, and will secure a much larger attendance and a better display of machinery, agricultural implements, stock, &c., at each of them. The directors of each have also made arrangements to have a steam plow and a road engine at each, which will draw immense crowds to see them.

The first fair in order will be the Agricultural Fair Association of the Cherokee County of Georgia and Alabama, which opens at Rome on the 10th day of October. MAJ. B. F. JONES, Sec., Rome, Ga.

2d. The Atlanta Agricultural and Industrial Association opens at Atlanta, Ga., Oct. 16. SAMUEL A. ECHOLS, Sec., Atlanta, Ga.

3rd. The Georgia State Agricultural Society, opens at Macon, Oct. 23. COL. DAVID W. LEWIS, Sec., Macon, Ga.

4th. The Cotton States Manufacturing and Agricultural Fair Association, opens at Augusta on the 31st Oct. E. H. GRAY, Sec., Augusta, Ga.

Our Georgia friends have always been very successful with their fairs, and the preparations now being made by the gentlemen having them in charge indicate a grand success. Our mechanics, artizan, and others would do well to send on their handiwork for competition.

# THE MARYLAND FARMER,

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## TO OUR FRIENDS.

Our friends everywhere are requested to present the claims of the *Maryland Farmer* to their neighbors. There are hundreds of farmers in and out of our State who are not now subscribing to any magazine devoted to agriculture and its kindred sciences, but who could be easily induced to do so, if the character of our monthly were properly presented to them. If each of our present readers were to secure only one new subscriber for 1872 they would not only be rendering us a great service, but advancing the interest of agriculture. We ask each of them to make the effort between this and December next. Single copies, \$1 50—five or more, \$1 each.

## MARYLAND STATE FAIR.

We again briefly call the attention of our readers to the Third Annual Exhibition of the Maryland State Agricultural and Mechanical Association, to be held October 3d, 1871, on their grounds at Pimlico. It promises to be by far the best exhibition that has yet been held. The preparations for it have been made in ample time to avoid confusion and disorder; the experience gained at the two former fairs has enabled the gentlemen having the present one in charge to rectify any inconveniences then existing. The track for the Trials of Speed is, in anticipation of the fall meeting, in admirable condition, and additional stabling has been put up for the accommodation of the stock to be exhibited. Everything that could be done to make the present Exhibition worthily represent the agricultural and mechanical resources of our State has been done by the capable and energetic gentlemen having the matter in charge. We trust that their efforts will be heartily aided and seconded by our farmers and breeders. It is most important at this time that that this Fair should be well sustained. This autumn will be especially favorable to us in the number of strangers that will visit the city of Baltimore. Very many of them will be interested in agriculture, and will come from States fertile, productive and progressive. They will be swift to see any deficiencies, and keen critics of any shortcomings.—We have within our borders the materials to show them that our little State of Maryland is not behind the larger and wealthier neighbors in good farming and in the pride of her people in fine and pure blooded stock. It is to be hoped then that no apathy on the part of those most interested will cause our Third Annual State Fair to be other than a complete and gratifying success.

## Maryland Farmer for 1872.

We would remind our readers that two more numbers will complete the volume for 1871 of the *MARYLAND FARMER*. We design making such improvements in its management for the coming year as will commend it more highly to the people of our State and neighboring States. We earnestly ask the co-operation of our friends to aid us in extending its circulation more generally. A very little effort on the part of our friends would secure a good list, or at any rate an extra copy.

## To Postmasters and Others.

We offer as an inducement to postmasters and others to solicit subscribers to the *MARYLAND FARMER*, fifty cent's on each subscriber sent—being \$1 per annum.



## Our Agricultural Calendar.

### FARM WORK FOR OCTOBER.

The present month is one of gathering and disposing. Besides collecting the remains of the season's crops there are, of course, preparations to be made for the coming winter, and for the work of the following spring. If wood has to be felled the fall of the leaves presents a favorable opportunity, with the prospect of fair weather, and at a temperature at once bracing and exhilarating without being too cold. If draining is to be done October is an excellent month in which to begin the work. Besides this the gathering of materials for manure, and the carting out of lime, to be spread over old grass lands or winter fallows, will engage attention. In short, there are many odd jobs that may be done, both in the woods and in the barn—wheat to be gotten out, if not thrashed earlier—corn to be brought in from the field, if it has been standing out in shocks so long, as is frequently the case, and corn to be husked which has been gathered and heaped for that purpose. For the rest the work for the month is as follows:

#### Seeding Wheat.

Wheat should have been in the ground by the 15th of September. If it has not been so seeded it should, without fail, be gotten into the ground between the first and tenth of the month. The longer the work is delayed the more thorough the preparation of the soil should be, and the more completely it should be enriched with fertilizers, to enable the young plant to push forward vigorously before the winter sets in. The best soil for wheat is a clay loam with a dry, well drained subsoil. Seed from one to two inches in depth, as deeper seeding has a tendency to retard the germination of the grain.—It will be found of benefit to change the seed frequently, and in selecting to be careful that it is plump, clean and heavy. Barn-yard manure, guano, or a well composted muck heap, are valuable as fertilizers; but it must always be kept in mind by the wheat grower that lime is an indispensable constituent in every soil in which wheat is grown.

We give a summary of the chief points to be observed in the cultivation of wheat.

*Soil.*—A clay loam.

*Best Preparation for Wheat.*—A clover ley.

*Best Variety of Seed.*—That which is clean, plump and heavy, and which has grown on a poorer soil, or in a more northern latitude.

*Depth of Seeding.*—From one to two inches.

*Method of Seeding.*—The drill is to be preferred whenever available.

*Time of Seeding.*—From the 15th of September to the 11th of October.

*Quantity of Seed per Acre*—Drilled, five pecks; broadcasted, not less than two bushels.

#### Rye.

Where land is adapted to the growth of this cereal, and occupies a southern exposure, rye may yet be seeded, though it is scarcely possible for the crop to turn out so well as if the seed had been in the ground six weeks ago. We are not, however, disposed to say that because the seeding has been delayed, it is better not to seed at all. On the contrary, while we have the strongest possible conviction that, when the proper season is missed, no amount of after culture can make up for the time that has been lost, there are, nevertheless, occasions when it is decidedly better to plant as late as the middle of October, and thus obtain a moderate crop, than to let the land lie idle all the winter.

#### Threshing out Grain.

Whether it is better to let the wheat remain in the straw, or to thresh it out at once, every intelligent farmer must judge for himself. In ordinary seasons, and where the market is near, it is usually advisable to take advantage of the market before the great bulk of the general crop is offered for sale. But there are times when a reasonable prospect of a heavy foreign demand renders it politic to hold back the grain until it is ascertained what the crop is in Europe.

#### Orchards.

Cut off all dead limbs and shoots smooth and close to the bark; cover the wounds thus made with a mixture composed of equal parts of rosin, tar and beeswax. Scrape the body of each tree free of moss and ragged bark, and finally wash it with the following mixture: 1 gallon of soft soap, 1 pound of flower of sulphur, and 1 quart of salt.—A peck of lime scattered under each tree, and dug in in the spring, will be found beneficial.

If a new orchard is to be planted it is advisable that the fruit selected should be such as is best adapted to the climate, and that instead of being purchased of travelling peddlers, the young trees should be the growth of a reliable nursery. If ordered from a distance care should be taken, and particular directions given, that the plants should arrive quickly, well packed, and the roots well protected from the sun or drying winds.

#### Cattle Yards.

Provide materials for compost heaps, and for bedding for the cattle for winter use. All rough, fibrous, but seedless materials, straw, wood's earth, leaves, rich earth, muck, &c., on hand, should be mixed with the manure of the barn-yard. Stir the

compost heaps occasionally, and wet it with the drainings of the yard. Every cart load of fertilizing material saved or made on the farm is so much money gained to the farmer.

#### **Pumpkins and Roots.**

Gather and store away. Keep them secure from frost.

#### **Milk Cows and Young Stock.**

Feed roots cut up fine, and a moderate quantity of wet food to these at this season. After the summer pasture the cattle begin now to feel the drastic effects of dry provender, and every means of this kind should be taken to keep them in good condition, and to better enable them to withstand the winter cold.

#### **Buckwheat.**

Being peculiarly sensitive to frost, care should be taken to harvest this crop early. Cut as soon as half the heads have turned black.

#### **Fall Ploughing.**

Clay soils that are compact and hard to break should be ploughed in the fall, and left open to the disintegrating action of the winter frost and snow.

### **The Frederick County Agricultural Fair.**

The next annual Fair of this Society will be held at Frederick, Md., on the 10th, 11th, 12th and 13th of October. For attractiveness and general success the Fairs of this Society during the past three years have perhaps been unequalled, as evinced by the immense attendance of visitors. Arrangements are being made to render the coming Exhibition still more attractive. The grounds have been enlarged, and the track extended to a half mile. Hon. Horace Greeley will deliver the annual address. The Baltimore and Ohio Railroad Company, will issue round-trip tickets, and will carry articles and stock at reduced rates.

### **The Cumberland Fair.**

The people of Western Maryland are making great strides in everything pertaining to agriculture and mechanics. Allegany county is doing wonders. In the last ten years her population has been increased about 40 per cent., and the city of Cumberland is growing now more rapidly than any other town in the State. In all directions buildings spring up like magic. Amongst these is a magnificent hotel to cost \$200,000. The Agricultural and Mechanical Fair to be held there on the 17th, 18th, 19th and 20th of October, promises to surpass those of the past. The trotting and running purses, in trials of speed, are \$600 each, and all other premiums liberal. A visit to the Fair will doubtless be most pleasant, and round trip half-fare tickets will be issued on the railroads.

## **Garden Work for October.**

The work for the month is as follows:

**Winter Spinach.**—We take it for granted that this has been planted during September, and is now in good growing condition. During this month give it a thorough hoeing and thinning out. Let the plants stand about four inches apart. A mulch of well rotted stable manure should be used if the soil needs enriching, or if the spinach is wanted for home use in mid winter, a light top-dressing of salt hay will be found of benefit and will protect the leaves from frost. The varieties cultivated are the Round spinach which is the most popular, and will stand the winter with but little protection; and the Prickly or Fall, which though not as productive as the Round, equals it in quality. The first is the best.

**Lettuce.**—When of a sufficient size, set out the plants in a warm border. Mulch them before cold weather sets in with hay, straw or other litter. Plant six inches apart, in ground that has been deeply spaded, thoroughly raked, and well manured.

**Setting out Cabbage Plants.**—The cabbage seed for the fall varieties should have been sown last month, and the plants be now ready for setting out. Early in this month prepare a bed in a southern or southeastern exposure. Spade it deeply and manure it heavily with barn yard manure, for unless the cabbage is deeply worked and highly manured, it is useless to expect a profitable yield. Rake and completely pulverize the soil and throw it up in parallel ridges from twenty seven inches to three feet apart, and about four inches in height; press the slopes compactly down with the back of the spade and set the plants midway of the ridge, and on the north side of it about six inches apart.

Towards the close of November strew stable manure or loose straw along the valleys between the ridges, and to about the height at which the plants stand in the row. Leave all thus through the winter. As soon as the frost is out of the ground in the spring, draw the earth from the crest of the ridges into the valleys, so as to level the entire surface. During the early stages of growth the spaces between the rows should be stirred frequently to keep down the weeds, and the ground should be kept as loose and mellow as possible. As the plants begin to expand, draw earth about their roots and at the last cooking give them a final hoeing and earthing up.

**Cauliflower and Broccoli.**—Work these carefully during the month. It must be kept in mind that there is little use in attempting to grow cauliflower or broccoli, unless the ground is well worked and



manured. The soil must be kept loose and clean. A slight top-dressing of Peruvian guano or finely ground bone at the first hoeing around the plants, will be of great benefit. Commence to hill the plants towards the end of the month.

*Endives*.—Tie up for blanching.

*Asparagus Beds*.—Clean and weed these thoroughly as soon as the asparagus stems begin to turn yellow. Mulch during the month with barn yard manure, and again in the spring and turn under as soon as the ground is dry enough to be worked. Apply in addition, if they can be had, fish, guano, bone dust or super-phosphate. Annual dressing of common salt will improve the quality and increase the size of the stems if applied either in the Fall or Spring. A mixture of salt and ashes, three parts of salt to one of ashes, is also an excellent fertilizer.

*Celery*.—Earth up the plants from time to time, and water freely in dry weather.

*Small Salading*.—During the early part of this month make the final seeding of small salading for the season.

*Rhubarb*.—The only reliable way to grow this plant is from roots. Twelve root plants in rich soil will give an abundant yield for family use. Myatt's Linnaeus is the earliest variety and possesses the finest flavor. The Victoria is a good late variety. If it is desired to grow the rhubarb from seed, the seed had better be sown during this month.

*Shallots, Garlic and Chives*.—All these roots should be planted out this month. Shallots should be planted in rows one foot apart, and three or four inches apart in the row; garlic bulbs or cloves one foot apart, two inches deep, and six inches apart in the row; chives ten or twelve inches apart each way.

*Horse Radish*.—Plant out a bed of this early in the month.

*Raspberries, Gooseberries, Currants*.—New plantations of these wholesome small fruits may now be set out. Set the raspberries four feet apart in the rows, and the gooseberries and currants at a distance of six feet apart. Cuttings of these last may now be taken and planted in a warm border, ready to set out the following autumn or succeeding spring.

*Strawberries*.—Clean off the beds and top-dress liberally with well rotted manure and wood ashes.

A GREAT PLANTER.—One of the largest planters of the South is Colonel G. B. Lockett, of Georgia. He has planted this year 6,000 acres of cotton and 3,000 acres of corn and small grains. At the lowest estimate his cotton crop will sell for \$180,000. Col. Lockett employs 360 hands, all black, and has no trouble with his help, who are orderly and tolerably industrious. Throwing out the value of of increase of slaves, he thinks that cotton can now be raised more cheaply than before the war.

## THE DOG TAX QUESTION.

*To the Editors of the Maryland Farmer :*

After your remarks on this subject, and the statements of *Patuxent Planter* and your other correspondents, I do not deem it necessary to adduce any further argument in support of the position now assumed by the enlightened agricultural element of our State, viz.: the necessity of a stringent dog law for Maryland. I shall be excused from an elaborate argument in defence of this position for the reason also, that the *Maryland Farmer* of September, 1869, contained a lengthy statement of losses sustained by sheep-raisers from the depredations of dogs, with statistics concerning that mighty sinew of the ponderous agricultural arm—the wool interest. I write now merely to call attention to the laws existing in Maryland upon that subject, and to urge that the whole State be included in their beneficent operation.

The General Assembly of Maryland (at its session of 1870 ) enacted the following law "for the protection of sheep in Queen Anne's, Dorchester and Somerset counties, and for reimbursing owners of sheep for damages sustained by them in the killing or injuring of sheep by dogs."

*Section 1* makes it the duty of the constables of the several election districts to make an accurate annual return of the number of dogs over four months old owned in the county.

*Section 2* provides for an annual levy of one dollar for each dog \* \* \* \* to be paid by the owner.

*Section 3* gives the constables ten per cent. of the amounts collected, and an additional ten cents for each dog returned, according to *Section 1*.

*Section 4* empowers the constable to kill the dog upon refusal or neglect of the owner to pay the tax, and allows him ten cents for each dog so killed, and for failure to execute the law the constable is liable to a fine of not less than twenty-five, nor more than two hundred dollars, one-half to the informer.

*Section 5* constitutes the monies arising from the levy, a fund to remunerate sheep-owners for losses by dogs.

*Section 6* prescribes the manner of ascertaining and paying such losses.

*Section 7* appropriates the surplus remaining of this fund at the end of the year to the School Board, provided that five hundred dollars be kept always on hand.

*Section 8* authorizes the constable to return the person inhabiting a house as the owner of any dog kept or straying around it, and to kill any dog not returned as having an owner, for which he receives a fee provided for in *Sec. 4*.

Section 9 authorizes any person to kill any dog who shall be seen running sheep, or if any owner of a dog known to worry sheep does not kill him upon information thereof, any person may do so whenever the dog is found at large, and the owner of such dog shall make full compensation for all damages done by it.

Section 10 makes the security of the constables liable for all monies collected under the Act and not paid over; prescribes the compensation of Justices of the Peace, and appraisers for services under the Act, and exempts from its operation "incorporated towns wherein a similar tax is imposed."

Section 11 makes it a felony to steal another's dog, and assigns the penalty therefor.

The fair and square terms of this law do not indicate that the curs of Maryland are being handled with gloves by our Legislators, and if its wise provisions could be made to apply to every part of the State, it would exert an immediately favorable influence upon the agricultural and industrial interests of society, for the connection is so close between the different branches of industry that any assistance bearing upon and facilitating production will accrue to the benefit of all classes in the community. But one or two defects appear in the law above quoted. It is questionable whether a tax of one dollar is sufficient. I notice a general concurrence among those who have written upon the subject in favor of a two-dollar tax, but the law usually comes out for a dollar, as a compromise measure, I presume, between those in favor of two dollars and those who believe half a dollar sufficient. I have noticed in agricultural conventions that the three sums have their respective advocates, and a case occurs to me in which one of your correspondents was engineering a dog tax through a convention where the one dollar tax was accepted, for fear a vote on the last amendment would name the tax at fifty cents. I have noticed also that some good friends of the measure advocate one dollar as calculated to produce more revenue than a two-dollar tax; and these have instanced the increased revenue from whisky when the tax was reduced to fifty cents from two dollars a gallon. As the special object is prohibition, not revenue, it appears to me the course most likely to *prohibit* the evil should be adopted.

Again, each owner of a dog should receive a metallic stamp containing the number of his dog on the register list, upon payment of his tax, and that the dog should carry that stamp affixed to his collar as a passport, all dogs without said stamp to be outlawed, and killed by any person. In the above Act the constable is the only person authorized to kill a dog, unless, according to *Sec. 9*, he is seen running sheep.

An Act was also passed at the same session of the Legislature for the benefit of Calvert county, levying a tax of fifty cents upon each dog owned in the county, "and to appropriate a portion thereof as a compensation to any person who may kill or destroy foxes in said county." That "compensation" is fixed at two dollars for each fox killed, and to appease the fox hunting interest this feature might be embodied in the general law for the State if deemed advisable. I trust the members of the Legislature from Baltimore city will make no opposition to the effort-making to secure the tax, as that city may be exempted from its operation by imposing a similar tax. Many flocks of sheep have been destroyed by dogs while on their way to the butcher, and near the city, and the city tax would not only increase its revenue, and materially prevent that terrible disease, hydrophobia, but be directly and beneficially felt by the sheep and wool raising interest. D. L.

**IMPORTED CATTLE**—Mr. Charles E. Coffin, president of the Muirkirk Iron Company, of Prince George's county, Maryland, imported recently from the Island of Jersey a lot of heifers, said to be among the finest and most costly full bred stock ever imported into Maryland. A red heifer, called the Portulaca, was bred in Essex, and was calved in the fall of 1869. Another, a roan heifer, is called the Belinda Oxford, and was calved latter in the same year, at Stratton Park. These fine cattle will most probably be exhibited at the Maryland Agricultural Show this month, with many other fine cattle owned by Mr. Coffin.

**PUBLIC SALE OF FINE STOCK.**—We call attention to the public sale of S. W. Ficklin, of Belmont Stock Farm, near Charlottesville, Va., who will offer for sale on October 24th, a number of stallions, stallion colts and mares and colts and fillies; short horn bulls, cows, heifers, &c. Mr. Ficklin's reputation for raising fine stock is so well known throughout the country that it is only necessary to call attention to this sale. Catalogues can be had by applying as above.

### Fourteen Numbers for \$1.50.

With a view of inducing new subscriptions to our *FARMER* for 1872, we offer to all subscribers sent in *this month* the two numbers of 1871—November and December—making fourteen numbers for \$1.50.—Our friends can serve us by calling the attention of their neighbors to this offer. Anyone sending us *five names* and \$5 will be entitled to an *extra copy*. We contemplate making such improvements for the new year as will commend the *FARMER* still farther to the patronage of the agricultural community.



## Grape Culture.

### GRAPE CULTURE.

PUT-IN-BAY, September 16th, 1871.

*To the Editors of the Maryland Farmer:*

When in Sandusky I could not resist the temptation to visit Kelley's Island, Middle Bass Island, and Put-in-Bay Island. You have recently been here with the Maryland Editorial corps, for I saw your name on the book of the Put-in-Bay hotel.— If you have made any comments in your paper about the beautiful group of islands around here I have not seen them, but have no doubt, at least some of your editors have described the scenery, &c., and therefore I shall say nothing about them. I came over especially to see and examine the vineyards. Did you do the same? If not, I wish you could have seen with my eyes. When you approached Kelley's Island did you see anything else on the cleared lands but vineyards? If so, you saw more than I did. Did you see anything else but vineyards, and forests in the background? Did you see the many large wine cellars at Kelley's Island, and the one partly built a few years ago, with an addition now in course of erection, by the great grapegrower and maker of still and sparkling wines of Cincinnati, Mr. Werk, with Mr. Wehrle, which will be two hundred and fifty-three feet deep, holding 150,000 gallons, at Middle Bass Island? If you have not seen all that I suppose you have not seen that every field here at Put-in-Bay, except the pleasure grounds, are planted with grapevines. Yes, even the spots intended for gardens and yards were planted with grapevines clear up to the houses. If you visited Perry's Cave, one-half mile from the hotel, you must have seen at least the foundation of a very large winehouse, now under roof, being built by a stock company, to stow away the wines of the different grapegrowers who have not yet cellars of their own. Presuming that the excitement of arrival, the welcome of the inhabitants, the various speeches, the good dinners so general on such occasions, gave you only time to taste the juice of that delicious fruit, but not to examine the mode of raising the fruit itself, I will give you a description of what I have seen; *seen with clear open eyes*. I examined the vineyards first, and afterwards the wine cellars, and at last the wine itself. Did you do the same? If the reverse, I guess the vineyards received the smallest and poorest part of the examination. Is it not so? Own up, for I heard all about you folks, but will not tell tales out of school. When I approached the above named island, and saw everything covered with grapevines,

I imagined that "fatherland" must have been transferred to this country, except the many towns around, and the Deutsche Rhine in the distance was missing. Also, grapes grow here on flat land, instead of hills. Nevertheless, the islands being surrounded by the clear waters of Lake Erie, the whole was just as imposing to me. The desire for grapegrowing here is even greater than in Germany, for everything else is almost neglected. No corn, no potatoes, no grass, not even garden vegetables are thought of; grapes alone, it seems, absorb their attention. On grapes alone they make their living. Formerly they raised them only for market, but since they sold so low they make them into wine. Although these islands are now the centre of grapegrowing, they are by no means the Eldorado, as is supposed. The land is most too flat. The seasons are almost too short, the influences of the Lake notwithstanding. The vines are almost overloaded with grapes, yet I doubt whether the Catawbas will ripen this season. They attribute it to the long drought, to the early cold weather at present, and to the tripp, a small fly, which eats off the leaves, and of course the fruit cannot ripen without leaves. I do not like their mode of training the vines. They leave entirely too much wood on the vines, and raise the grapes so low that they almost touch the ground. Air nor light can reach the fruit, and on top of the trellis are masses of unnecessary shoots and leaves, which retard the ripening of the fruit. It was only Mr. Wm. E. Sibley's vineyard where Concord grapes would in any way compare with the Concord grapes raised in my own vineyard, and he is an intelligent and persevering grapegrower. He raised them higher from the ground, but admitted that he also had let his vines grow too bushy, and that "Fuller's" was the only true method. Vintners pay here \$700 per acre for land suitable for grapes, and from \$1,000 to \$2,000 per acre with vines in full bearing. My friends say I have grapes on the brain, but here it seems the brains have run away altogether with grapes.

The grapes raised here are mostly Catawbas, also a great many Delawares, but I have not seen a bunch that would compare with those I saw last fall in the vineyard of Abraham E. Groff, of Owing's Mills, Md. Taking all in all, I would not exchange one acre of my vineyard for two acres up here. I still insist that Maryland is one of the best grapegrowing States. We have hardly ever too much rain in season, and the temperature is more even, and the seasons longer, than in any of the Western grapegrowing States. We must only find out the sorts best suited to our climate, land and situation. The Concord grapes are also grown here to some extent, and seem to do well everywhere. But we must not raise these exclusively, but try cautiously new and better

kinds. By my return I will state which sorts have done the best with me, and with which kinds I have been humbugged. We must also prepare for making wine whenever grapes get so low in market that they will not bring a fair remuneration for capital and labor expended in raising them. Wine, intelligently and honestly made, will not depreciate, but will gain by age.

There are over five hundred acres of vineyards on Kelley's Island, three hundred acres on Middle Bass Island, three hundred acres on North Bass Island, and four hundred acres on Put-in-Bay Island; in all, over fifteen hundred acres, within a radius of a little over three miles. By the tremendous crop this year, what should the vintners do with so many grapes? Besides grapes are raised most everywhere else, where they formerly found a market. I shall visit a great many more grapegrowing regions before I return home, and if I have time to spare, will give you a few jottings.

Very respectfully yours,

G. H. MITTNACHT.

#### "CLOVER AND ROTATION OF CROPS."

The article in the May number of the *Rural Carolinian*, reminds me of "the good old times" when I was a farmer—and, I may add, a successful one—in Western North Carolina.

I adopted there a rotation which succeeded admirably. I commenced with corn, plowed deep, spread all the manure I could gather on the surface, harrowed thoroughly and opened my drills with a narrow long bull-tongue plow, running *deep*. The plow being narrow, and land in good order, the seed when planted was not more than two inches below the surface, but quite deep enough. I cultivated level, first running deeply and very close to the corn with a small subsoil, followed soon after with a cultivator. Second plowing, subsoil again, deep but a little off, (say six or eight inches from the corn). I then used the cultivator as often as practicable until the corn was between three and four feet high, when I again put the subsoil deep as possible into the centre, between the corn rows. I followed up with the cultivator and passed the hoe through, chopping out any weeds or grass, and leaving everything *level* and in splendid order. This was towards the middle or end of July, in that climate.

The laying by of the corn was immediately followed by the sowing of my grass seed—clover, timothy, red top or any other—scattered evenly along the corn rows. If we had a rain within a day or two after sowing the seeds, the work was accomplished. If no rain, then a light brush was dragged through each row by a mule or horse, with a small

boy to ride and guide. A good walking around would brush in ten or twelve acres per day. I never failed to get a good stand of grass, planting as described above. You must know, Mr. Editor, that at the laying by of the corn crop the soil is in the very best condition, if the corn has received proper attention, and work done as it should be, grass seed put in soil that has been well worked up for several months, will soon make its appearance and grow finely, if not killed out by the hot sun. Now, the corn offers all the protection from the sun that is needed for the grass when young. By the time the blades are fit for fodder, the grass is strong enough to take care of itself.

After the corn was gathered, (at any time before April) I cut the corn stalks close to the surface, with a mower or a sharp hoe. If the grass is to be converted into hay the first season, the stalks must be hauled off; but if to be grazed, the stalks after chopping may remain. After the corn stalks have been removed, and after a rain, when the soil is sufficiently soft to admit the pressing in of the corn stumps, the meadow must be rolled. This may be done late in spring when the grass is up several inches high. The rolling will allow the mower to shave very close.

By sowing clover on grass seed as above, a full crop of hay may be secured the following summer—ten or twelve months after seeding. To put in grass seed with small grain, the young grass will be smothered out if your oats or wheat is of thick and luxuriant growth. The corn protects from the sun, but does not in the least smother the young grass.

Now for my rotation. I have secured a good stand of clover *after* my corn. The clover is cut or grazed off in *early* summer; a second crop is allowed to grow for seed. When the most advanced *burs* (say about one-third) turn brown, then put in the plow and turn everything under deeply. In fall or spring, plant wheat or oats. After your small grain is taken off you will have quite a sprinkling of clover to turn under in the early fall, or just before corn planting in the spring, if you prefer to turn in your stock in your stubble field in the fall. Plant corn again in spring, and give yourself no farther concern about your stand of clover. Work your corn well and lay it by in nice condition; your clover will appear in due time. With the above rotation, my farm improved yearly (beyond my most sanguine expectation).

If the farmer will give to the soil the *second* crop of clover, (the second crop of the season,) he will never have to re-seed his field. But if he persist in grazing off every thing and return nothing, his rotation will end in disappointment, and the old cry of "the clover has run out."

Clover seed should not be planted more than a fourth of an inch deep. If buried deep it will remain in the soil, however, for years without vegetation until brought near the surface, under the influence of atmosphere. I have seen an old pasture, which has been closely grazed for many years in succession, plowed in winter, and a good stand of red clover appeared in the spring—[F. W. J., in *Rural Carolinian*].



## THE WHEAT CROP—SELECTING SEED—MONTGOMERY'S SEED WHEAT SCREEN.

The partial failure of the wheat crop the past few years has exercised the farmer in adopting the most improved modes of culture, such as preparation of the land, choice of fertilizer and the selection of seed.

Wheat culture is familiar to a very large number of our farmers, but comparatively few attain a reasonable share of success, their failure being attributable to various causes, prominent among which is the character of the seed. It has been advised to reduce the number of acres cultivated, and to concentrate the time, labor and manure on the reduced acreage, and above all things to secure the very best seed wheat.

The editor of the *Southern Planter and Farmer* in an article on the Wheat Crop in the August number concludes his remarks as follows:

"Another fertile source of bad crops is *poor seed*. We asked last year that some of our readers should try the experiment of sowing a small portion of ground, prepared with extra care, especially for seed, and if any one thought proper to adopt the suggestion we should be very glad to hear the result.

Other things being equal, the earliest matured wheat should be chosen for seed, and of this should be taken the heaviest grains. These can be separated without much trouble by throwing the wheat in small parcels across a barn floor, and against a slight wind—those grains reaching the farthest point being, of course, the heaviest."

A correspondent in the same magazine writing from Rockbridge county, Va., on the subject of the wheat crop, says:

"I agree fully with all your suggestions as to the propriety of diminishing the area sown to wheat, and giving that area the benefit of all the applications in way of plowing, pulverizing, fertilizing, &c., now bestowed on the larger surface. This will, in almost every case, result in better paying crops. As an instance of experience this season, we know of good wheat land on farms, where they cultivated a large surface, from seventy to one hundred acres in wheat, not getting a larger aggregate than plots of from fifteen to twenty acres of no better land yielded. One case wherein seventy-seven bushels sown yielded only 141 bushels—not two for one—compared with that occurring close by of 200 bushels harvested from fourteen acres, over fourteen bushels to the acre, or nearly twelve for one sown—the success in the latter case attributed to extra care in preparation and top-dressing.

I would make a suggestion in relation to the last item mentioned in the article, viz., selection of seed. A better way to secure the best and choicest of seed is to use the fan freely, running the selected matured wheat through the wind mill several times increasing the blast to the greatest extent possible. A farmer once detailed to the writer the following experience with a crop of light wheat: As it came from the machine he found the weight only fifty-six pounds to the measured bushel. He determined to sift more thoroughly what he intended for his own bread and seed, and accordingly passed it through

the mill three or four times, when he obtained a wheat weighing sixty-two pounds to the bushel.

Such a course will effect the object aimed at in your suggestions, we think, better than the one indicated in your article, and were this done every year, there is but little doubt that we would be called upon record in a few years, a marked improvement in the wheat crop."

We have extracted the above on the importance of cleaning seed wheat for the purpose of calling the attention of wheat growers to a recent invention of J. Montgomery, of Baltimore, which he calls the *Revolving Perforated Zinc Screen*, and which we have witnessed in full operation, and seemed to us admirably adapted to the purposes for which it is intended—the thorough cleaning and selection of seed. This screen is made in three sections, of perforated zinc, each section having different sized holes, they being *round* instead of *square*, as in wire screens. The cylinder revolves in a frame or box, the box being so made that the cockle and small wheat from each section runs out separately, thus obviating the difficulty attending the cleaning of grain with the Fan, as the meshes in the screens soon become filled up, either with large cockle or small wheat, when it is necessary to suspend the work of the Fan until the screens are cleaned out. It is claimed that the zinc screen will turn out better wheat at one separation, than can be got after passing four or five times through the Fan, and that the screen always remains open and clean, hence losing no time in the cleaning of the perforations. The advantage claimed over all other cockle machines is its cheapness, speed and simplicity; and further, while other machines may take out the cockle they will not give you the different grades of wheat. It is not pretended that there are no other screens in the market that are a success, but they are beyond the reach of the farmer from their high price, whilst this one commends itself from its low price, and its greater rapidity in cleaning, as you can work it all day without stopping to open the meshes, as is the case with most of the screens and Fans.

This machine has been tested by a number of gentlemen who have purchased them, to their entire satisfaction, as is evidenced from the following extracts from letters received by Mr. Montgomery:

Mr. E. T. Evans, of Middletown, Delaware, writes: "We have had the Montgomery screen out among several of our farmers, and it works admirably, freeing the worst wheat almost entirely of cockle, cheat, small and bad grains. We think it a valuable invention for the preparation of seed wheat."

Messrs. I. M. Parr & Son, one of our leading Commission Houses, Baltimore, writes: "We take pleasure in stating that we have purchased and are now using one of 'Montgomery's Magic Perforated Revolving Zinc Screen,' and that it is the best machine for its purposes we have ever used, doing well all that it pretends to do."

*For the Maryland Farmer.*

### ANALYSIS OF SOILS.

As many honest and simple minded men have very imperfect and crude ideas of the processes by which analysis is effected; and, consequently, but little correct appreciation of the time and labor necessarily involved in the performance of an accurate and thorough analysis, I propose to give a brief sketch of the means used to effect the purpose.

In the first place, then, let us state, that all chemical analyses are effected by using materials which volatilize, dissolve, or precipitate, certain substances, and not others. And in one or the other of these modes, we separate the several ingredients of every compound; and then collect, cleanse, and weigh them. The analysis of soils, is no exception to the general rule.

But soil is a compound which contains so many different substances, so variously combined, that an honest, thorough, and accurate analysis is a tedious, difficult, and laborious job; and one which involves much labor, of both mind and body, to attain an accurate result. The more especially is this true, if the analyst has not at hand, such facilities, in the way of apparatus, as have been devised for the purpose.

In examining a specimen of soil, we have to ascertain its physical properties, as well as its chemical composition. And this is generally the first step in the general process of a complete analysis. For instance, the density of the soil, its absolute weight, the relative proportions of gravel, sand, and clay; the absorbing power of the soil, its power of holding water, the rapidity with which it dries, its power of absorbing heat from the sun, are all properties which influence the growth of vegetation, and are therefore inquired into. And the different manipulations resorted to, to obtain a knowledge of these facts, consume much time and labor. The next inquiry is, as to the *organic matter present in the soil?*

This is solved, by first drying, in an oven or otherwise, at a temperature not higher than 250° to 300 F., and then burning an accurately weighed portion, in the open air, till all the blackness has disappeared. Weighing again, and deducting the present weight, from the weight before burning; the difference gives the organic matter which has been volatilized.

The reason of drying, under a temperature less than 300° F., is that the water is thus volatilized, without a change in the humic and ulmic acids, which are two important ingredients of the soil, and should be estimated. The determination of the quantity of humic acid is effected, by boiling with a solution of carbonate of soda, for an hour; the

flask then removed from the fire, filled up with water, well shaken, and the particles of soil allowed to subside. The clear liquid is then poured off, and it has a brown color, if it has taken up any humic acid. The process, of boiling with fresh carbonate of soda, is then repeated, once or twice; until the pale color of the solution gives evidence of the whole soluble organic matter, having been taken up. The colored solutions contain all the humic acid, and they are then mixed and filtered. When filtered, muriatic acid is slowly added to the colored liquid, till effervescence ceases; and the whole has become distinctly sour. On being set aside, the humic acid falls, in brown flocks. A filter is now dried, carefully weighed, the liquid filtered through it, and the humic acid thus collected. It must be then washed in the filter with pure water—rendered slightly sour by muriatic acid—till all the soda is separated from it, and dried at 250 F., until it ceases to lose weight. The final weight, less that of the filter, gives the quantity of humic acid contained in the portion of soil submitted to examination. But, insoluble humus still remains in the soil, after the treatment with carbonate of soda, and gives a more or less brown color to it. To determine this, the soil, which has been treated with carbonate of soda, is boiled with a solution of caustic potash, repeated, if necessary, as in the case of the soda solution.

The vegetable matter is thus changed in constitution, is dissolved in the caustic potash, giving a brown solution, and is separated in brown flocks by the addition of muriatic acid, and is then collected and weighed, as above described.

The sum of the weights of the above mentioned substances, deducted from the whole weight of organic matter, (as determined by burning,) gives that of other organic substances present in the soil. To determine the several inorganic substances, which may be found in the solution (after digesting with dilute muriatic acid for 12 hours,) of a portion of soil which had been previously digested in distilled water, dried at 250° F., and weighed; the following approved scheme is recommended by authorities, and will explain the process, and give some idea of the labor, in doing it.

The solution should be decidedly sour, and may contain lime, magnesia, alumina, oxide of iron, oxide of manganese, potash, soda, and phosphoric acid.

*Add Caustic Ammonia in excess.*—The effect of this is to divide the substances in the solution, into those which are insoluble in excess of ammonia, and those which are soluble.

The oxide of iron, alumina and phosphoric acid are precipitated, while lime, magnesia, oxide of manganese, potash and soda, may remain in the



solution. We then have two divisions of the original solution, with ammonia added to one of them. But acetic acid will dissolve alumina and oxide of iron, but will not dissolve phosphates of alumina and iron. We therefore digest the precipitate, caused by the caustic ammonia in excess, in *acetic acid*, and if all is dissolved, we know there is no phosphoric acid in that precipitate. But if there is a part remaining undissolved, it may consist of phosphate of alumina and iron; while the liquid solution may contain alumina and oxide of iron. We therefore fuse the part remaining undissolved with carbonate of soda, and wash with distilled water.—This separates the insoluble alumina and oxide of iron from the soluble phosphoric acid, and the latter is determined by neutralizing the solution with nitric acid, and adding nitrate of silver, when phosphate of silver will fall. This may be cleansed and weighed, and the amount of phosphoric acid determined. The alumina and oxide of iron are then dissolved in muriatic acid and added to the solution of alumina and oxide of iron, caused by the digestion in acetic acid. By adding ammonia, and digesting this with caustic potash, we separate the oxide of iron, wash and weigh. We then add muriatic acid to the solution of alumina in caustic potash until it becomes sour, then ammonia in excess, when the alumina falls, and is easily washed and weighed.

We have thus described the mode of determining each and all of the ingredients found in the *insoluble* part of the inorganic substances in caustic ammonia in excess.

To determine those in the clear solution, resulting from the addition of caustic ammonia in excess to the solution produced by digesting the soil in dilute muriatic acid, we *add to the clear solution oxalate of ammonia, and cover it from the air*. Oxalate of lime falls; it may be washed, heated to redness, to convert it into carbonate, and weighed. This gives us the lime. Then add hydro-sulphate of ammonia to the remaining clear liquid; if manganese is present it falls as a sulphuret; dissolve in muriatic acid, precipitate by carbonate of soda, wash, heat to redness in the air, and weigh. This gives the manganese.

Render the clear solution sour by muriatic acid, boil, filter, evaporate to dryness, and heat to incipient redness, to drive off all the ammoniacal salts that might be present; then re-dissolve in a little water, mix with a little pure red oxide of mercury, evaporate again to dryness, heat to redness, and treat with water. Caustic magnesia remains, if present, undissolved; wash, heat to redness, and weigh. This gives the magnesia.

The solution contains the chlorides of potassium

and sodium, if present. Evaporate to dryness, weigh, re-dissolve in water, and add bi-chloride of platinum, to separate the potash. Wash the precipitate with weak alcohol, dry by a gentle heat, and weigh. Thus we have the potash. The chloride of sodium remains in solution, and its weight is found by deducting from the weight of the mixed chlorides (previously ascertained) that of the chloride of potassium. Thus we have the last ingredient of the solution, obtained by digesting the inorganic substances in cold dilute muriatic acid. But there is still some earthy matter in the soil which has not been dissolved by the *cold* muriatic acid. The undissolved portion may then be treated with *hot* concentrated muriatic acid, stirred for a few hours, and the solution evaporated to dryness. The dry matter is then moistened with a few drops of muriatic acid, and treated with distilled water. What remains undissolved, is silica, which must be collected on a filter, dried, heated to redness, and weighed.

The solution may contain oxide of iron, alumina, lime, magnesia, potash or soda, which existed in the soil in the form of silicates, and which were not dissolved in the *cold* dilute acid.

These may now be determined, as above described, in the determination of the same substances, in the solution of *cold* acid. But the soil may still contain alumina, not soluble in hot muriatic acid, and quartz sand, and finely divided silicious matter. By drenching the residual soil with concentrated sulphuric acid, and heating till the sulphuric acid is nearly all driven off, and treating with water, and adding ammonia to the filtered solution, alumina and oxide of iron, (if any be present,) will be thrown down. The treatment with sulphuric acid must be repeated until no more alumina appears.—That which the sulphuric acid leaves behind must be washed, dried, heated to redness and weighed, and it will be found to consist chiefly of quartz sand. The accuracy and care of the various processes are then tested by adding together the weights of the several substances that have been separately obtained, and comparing the sum with the weight of the soil employed. We thus arrive at the results which are sought for in analysis of soils.

It will be seen that the use of an accurate pair of scales is of the first importance; that a knowledge of the chemical properties of the different substances is likewise needed; and that an honest, patient and painstaking operator is necessary to the attainment of accuracy in the results.

And yet, some of our law-makers and law administrators, appear to think that every citizen of the State should have this series of processes performed for him as often and as repeatedly as any one may desire, without fee or reward. The services of an

agricultural professor are advertised for to teach chemistry, mineralogy and botany; and when elected, the President of the Board of Trustees, and many of the managers, seem to think it very unreasonable if that professor has not done this for any and all the citizens of the State, without compensation for his time and labor, and without the apparatus necessary to the performance of the duties! They appear to think that the manipulation can be effected without implements, and that the duty of a professor of chemistry, in the Agricultural College, is merely to ascertain, for them, what are the ingredients of any sample of soil or rock which they may bring to him, *without cost to themselves.*

Is this meeting the requirements of the laws of the State, and of the United States? which call for instruction in those branches of science and arts which relate to agriculture and mechanic arts? Are the results of science to be grasped with the mere force of *memory*, and the whole attention given to the processes of art? What is this more than the old apprenticeship? Science, thus learned, does not educate nor enlighten; its possession will be evanescent, and its influence as a passing shadow. The memory is treacherous, and will lead to error in practice, whenever there is a modification of circumstances. The application of science to the advancement of art, requires a knowledge of the *principles* of that science; and they who neglect these will be in danger of charlatanism.

A. H.

CAHOON SEED SOWER—INGERSOLL'S HAY AND COTTON PRESSES.—We call attention to the advertisement of Spear Brothers, of Baltimore, who offer for sale the Cahoon Hand Broadcast Seed Sower, a valuable machine. Also, Ingersoll's Hay and Cotton Presses—this press has become very popular.

CHAPIN'S REAL ESTATE ADVERTISER.—This monthly contains a large number farms and property for sale, giving a description of each. It is published monthly by Geo. H. Chapin, at the New England Farm Agency, Boston. The sales of this house are very extensive, and is regarded as one of the most reliable agencies in the country.

MUIRKIRK STOCK FARM.—We have received from Chas. E. Coffin, Muirkirk Furnace, Prince George's county, Md., his Catalogue of Pure-bred Short Horns, containing the full pedigrees of five Bulls and 32 Cows, comprising his magnificent herd. Also catalogue Berkshire Pigs, some of them imported from England and Canada. The catalogue is illustrated.

Always provide an equivalent for the substance carried off the land to the products grown thereon.

## Horticultural.

### PEAR TREES AND HALE'S EARLY PEACH.

After receiving all the information we have obtained either from years of personal observation or from reports of reliable fruit growers, we have come to the following conclusions:

1st. That pear culture is more successful on the sea coast belt (not more than twenty miles inland) and in the vicinity of the great Northern Lakes, than further inland. The influence of the sea and lake breezes seems to have a marked effect upon the vigor as well as continued fertility of the trees. In this belt *pear blight* is scarcely known. Furthermore, we are convinced beyond cavil, that pear trees are more fruitful and healthy in clay soils than in those of lighter texture. In every orchard which has come under our notice, we invariably found pear trees thrive best in the most compact clayey parts, providing the land was well drained and well prepared.

2d. That Hale's Early peach is not suited to the sea coast belt. We have before us most conclusive proofs of what we advance, and our advice would be *not to plant* this variety where the influence of sea breezes is felt.—*Farmer and Gardener, Geo.*

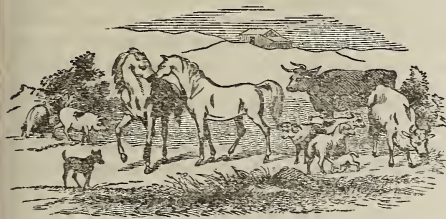
### WHITEWASHING APPLE TREES.

This very old mode, among tidy farmers, to make their apple orchards look nice, but which for many years has been next to abandoned, is coming into vogue again, and discussions are being indulged in as to the propriety of it. What we know about the matter ourselves is that we do not think that it makes much difference so far as the health or productiveness of the trees are concerned, whether they are whitewashed or not. In other words we don't think that "it pays." It certainly has a tendency to close the pores of the trunks, as well as that it has an unnatural appearance. So far as it is claimed that the whitewash causes the old bark to scale off, and hiding-places of insects to be disturbed, and this is about all that is claimed for it, how much better for every farmer having an orchard, to *scrape* the trees once a year, or only every other year, and follow it with a *washing* of whale-oil soap or carbolic soap and water, applied with a stout broom? This would be *sure* to dislodge the insects, open the pores of the trees, and give them a natural, healthy appearance. This would do the work effectually, and leave no room for doubt or discussion.

Whatever aid the whitewashing of trees may be to their health and productiveness, the best orchards we ever saw, which bore full crops for a generation, were not whitewashed, but scraped and washed with "soft" soap and water.—*Ger. Telegraph.*



## Live Stock Register.



### MUTTON SHEEP.

An esteemed correspondent, excepts to our speaking of Southdowns as "the mutton sheep," as we did last month. He says:

"Last January I bought from Canada, as a study, a Leicester ewe which cost me \$12, delivered in New York. February 1st I had a fine lamb and the ewe has just been shorn, yielding a fleece of 15 lbs. This was the result of no forcing or extra care, but simply generous feeding and a decent regard for comfort such as any man would give; simply shielding from storms in an open yard. For several days previous to shearing, the ewe could scarcely support the weight of her fleece but lay panting on the ground. The flesh seems firm and delicate and I shrewdly guess equal to any Southdown. If any other *greenhorn* can make a better showing than this they can "go up head." I am satisfied with my luck and shall not feel jealous. The ewe weighed, just after lambing, 143 lbs."

While we still hold our former position in relation to Southdowns, we certainly have no wish to underrate the value and excellence of the long-wooled breeds. On the contrary, we believe that thousands of Cotswolds, Leicesters, and Lincolns might be profitably added to the live stock of any of the highly cultivated Northern and Middle States. If a small flock of any of the long-wooled breeds was introduced upon every farm in the fruit and grain regions of the country where the small area of the farms and the high price of land forbid the profitable keeping of fine-wooled sheep, they would subsist upon the forage that now goes to waste. A few sheep turned into an orchard, will pick up their living during the entire season, keeping down the grass, eating wormy fruit as it falls, and thus preventing the future of worms, and leave the ground enriched by their droppings. The barks of the trees are easily protected from injury by the application of a wash of dilute cow-dung or any other offensive substance. The wool and increase would not only be a source of direct profit, but an occasional spring lamb slaughtered for the farmer's own table makes a welcome change from the salt pork dietary which is so universal. For such purposes as these there is probably no breed of sheep so pro-

fitable as the long-wooled breeds, and we are glad to publish our correspondent's successful experience with his Leicester ewe. We hope it will stimulate many others to "go and do likewise."

But where sheep are raised for the sole purpose of furnishing mutton to the markets of a city like New York—which we supposed was the purview of the question published in our June number—no breed of sheep pays better than the Southdown or Shropshire. Hon. George Geddes once remarked to us, "The long-wooled sheep furnished the mutton for the English workman; but the English gentleman is content only with the mutton of the Southdown." But the class is a small one, and found only among city epicures who are willing to pay for the difference between the juicy, delicate mutton of the Southdown and the really excellent but fatter flesh of the Leicester, Cotswold or Lincoln.—*Live Stock Journal*.

**DRENCHING HORSES.**—Whenever it becomes necessary to administer liquid medicine to a horse, extreme care should be taken that it does not pass into the lungs. A horn should be used, and the animal's head should be well elevated, and the mixture be poured down steadily, but not too fast. Horses, after the administering of a drench, are often troubled with a cough and very offensive breath, occasioned by the passage to the lungs to some of the medicine. The animal may recover from such ill-treatment, but often dies after the lapse of weeks or months, or perhaps suffer for years from a chronic cough, and occasional inflammation of the lungs. The fact is, that the administering of liquid medicine to a horse is a very dangerous operation. Great care should therefore be exercised in feeding, watering, and working horses, so as to keep them in good condition, needing no medicine. Especial care should be taken to avoid exposing them to cold winds or rains when in a state of violent perspiration. When medicine becomes necessary, a ball is much the safest manner of administering it.—*Hearth and Home*.

**SHORTHORNS AS MILKERS.**—A Central New York correspondent, of the *Country Gentleman*, says he has a Herd Book cow now fourteen years old, which gave May 16th, twenty-four quarts of milk. He adds: "I bet on fourteen pounds of butter per week, and she has never seen the day since she was two weeks old she couldn't go to the butcher, but then I fed her in winter and she has grass in summer. She is described as a "quiet, sleepy, short-legged cow", and the statement as to her condition, feed and product, is made because we once happened to inquire of the writer whether the condition of most well-kept herds of Shorthorns is really due to a natural aptitude for flesh, or to heavier feed of oil meal, grain, etc., than their owners would acknowledge."

## Ladies Department.

### THE EVENING HEARTHSTONE.

Gladly now we gather round it,  
For the toiling day is done,  
And the gray and solemn twilight  
Follows down the golden sun.  
Shadows lengthen on the pavement,  
Stalk like giants through the gloom,  
Wander past the dusky casement,  
Creep around the fire-lit room.  
Draw the curtain, close the shutters,  
Place the slippers by the fire;  
Though the rude wind loudly mutters,  
What care we for wind-sprite's ire?

What care we for outward seeming?  
Fickle Fortune's frown or smile?  
If around us love is beaming,  
Love can human ills beguile!  
'Neath the cottage roof and palace,  
From the peasant to the king,  
All are quaffing from life's chalice  
Bubbles that enchantment bring.  
Grates are glowing, music flowing  
From the lips we love the best;  
Oh, the joy, the bliss of knowing  
There are hearts whereon to rest!

Hearts that throb with eager gladness—  
Hearts that echo to our own—  
While grim care and haunting sadness  
Mingle ne'er in look or tone.  
Care may tread the halls of daylight,  
Sadness haunt the midnight hour,  
But the weird and witching twilight  
Brings the glowing hearthstone's dower.  
Altar of our holiest feelings!  
Childhood's well-remembered shrine!  
Spirit-yearnings—soul revelations—  
Wreaths immortal round thee twine.

### A GOOD WIFE.

We concede that man is, or should be, the rightfully constituted "head of the family," and all good wives would have it so. We concede that he is the head of the wife; and every real wife, be she president, queen or empress, would prefer that a manly man should be at the head, and take the lead. It is in accordance with the order of nature, and according to the teachings of Scripture. Every man ought to be capable of assuming and maintaining such relations. It is his province to brave dangers, to protect and to defend. But suppose the gray mare be the better horse? In other words, suppose the wife to be in every way the most capable of taking the lead? Suppose she be the better captain? It is a general rule that the best thought governs, and the best mind leads. Man is supposed to have intellect, reason, and practical common sense; he should have constructiveness, integrity, hope, application, perseverance, dignity, resolution, and executiveness—all manly qualities. Women should have much of the same, with a predominance of kindness, affection, taste, economy, order, sense of propriety, spirituality, and devotion—all wifely, womanly qualities.

A good wife is supposed to have finer and higher sensibilities than her husband; while his tendencies are more or less earthward, hers are supposed to be heavenward. At any rate, she will hold him steadily to duty, and keep him up, when, without her, he would wander, indulge in encraving luxuries, and go down to the appetites and passions. It is not in the presence of his good wife that he indulges in his intoxicating cups, or in bacchanalian riotings, but in her absence. It is not in the presence of wife and other loved ones that those frightful games of chance called "gambling,"

which so often result in ruin, despair and death, are indulged in, but in their absence. At home, most men conduct themselves with more propriety and circumspection than when abroad among strangers. Why? The influence of a good wife—next to one's religion—is all-potent. Is a man tempted to smoke, chew or snuff tobacco? The thought that it would offend his loving wife would cause him to refrain. Though this be not the case with all, it is certainly so in many instances. There are weak women who, on becoming wives of self-indulgent men, to show their desire to please, stultify their natures, and may be heard to remark, "I like the smell of a good cigar;" "I like the taste of wines, porter, beer," etc., when the truth is they only endure them. Now, what are the consequences of such weakness? The man inclines all the more to such indulgencies, having the sanction of his wife. One kind, decided word from her would have changed the whole course of his life, and have made him self denying, instead of self-indulgent. He becomes a sot, cannot live without his pipe, his mug of beer, or glass of whisky. But is he not altogether to blame, rather than his wife? Granted, but she could and should have helped him. He needed just that moral and spiritual encouragement which she, as a good wife, could have given. "I like the fumes of a fragrant Havana," has brought down many a man to a drunkard's grave. "I wish you would not smoke," has saved many men from the sin of self-indulgence, dissipation, vice, and premature death!—*Phrenological Journal*.

### PRACTICAL IDEAS.

To be a good housekeeper requires education and practice; but if a woman's heart is in the work she will soon learn, if necessity places the duty before her.

When the comfort and prosperity of a loved husband renders it necessary to economize and live to the best advantage with small means, a devoted wife will turn her thought and care to the duties of her home.

The help of a good, careful prudent housekeeper, enables a man to advance his business prospects more than anything else a woman can do.

The superficial accomplishments of a boarding-school miss are nothing compared to a practical education in all that pertains to making home attractive, and sensible men know it.

It is very imposing to witness the majestic sweep of yards upon yards of expensive silk flounces and laces into a parlor, but, young man, it requires a large income to support so much style.

It is delightful to talk with a young lady who knows French, and all the latest novels, and to have a divine creature dispense her best skirmishes of flirting with her eyes, smiles and fan, but, young man, there oft is but little heart or sincerity in such practised charms. A girl who has only a common school education, and the accomplishments taught her by a loving mother, of cooking and all other domestic duties, will be more likely to make you a good wife.

She may not have the most polished address. She may not be able to entangle you with battalions of arts and wiles with which a petted fashionable belle surrounds and captures beaux, but she will prize the love of an honest heart more, and in truth and sincerity devote her life to requiting the love and kindness given her.

If your income be only a few hundreds a year, a fashionable devotee of style and heart smashing will in a few years fret herself into a miserable discontented wreck, and be a dead weight upon you; while a fresh-hearted, domestic girl will develop into a blooming matronly woman of sense and responsibility.—*Elm Orlov, in Pomeroy's Weekly*.



## DOMESTIC RECIPES.

**ENGLISH PUDDING.**—One cup molasses, 1 cup chopped raisins, 1 cup milk, 1 cup melted butter, 1 teaspoon soda, flour to make thick as ginger-bread; steam 2 hours; sauce.

**COTTAGE PUDDING.**—One pint milk, 1 pint flour, 1 cup sugar or molasses,  $\frac{1}{2}$  cup butter, tablespoonful soda; steam two hours; sauce.

**SUET PUDDING.**—Half pound suet, half pint molasses, 1 pint flour, 1 cup milk, tablespoonful soda, spice to taste.—Steam three hours and serve with sauce.

**CHERRY PUDDING.**—Three eggs, 1 quart milk, 1 pint cherries,  $\frac{1}{2}$  teaspoon soda, flour to make a stiff batter. Steam or bake it, and serve with sweet sauce.

**PUDDING SAUCE.**—One cup sugar,  $\frac{1}{2}$  cup butter, 1 spoonful flour, beaten together; add  $\frac{1}{2}$  cup of jelly, and  $\frac{1}{2}$  pint boiling water.

**FARINA PUDDING.**—Take 1 one pint of water, 1 of milk, and when it boils stir in 5 spoonfuls farina, and let it boil fifteen minutes; then beat the whites of three eggs to a froth, stir in and let it come to a boil; then sweeten to taste, and flavor. Make a soft custard with the yolks of 3 eggs and 1 egg and 1 quart of milk; pour it over and serve when cold.

**FARMINGTON CAKE.**—Two cups dried apples simmered two and a half hours, in  $2\frac{1}{2}$  cups of molasses, 1 cup butter, 1 cup sour milk, 1 spoonful saleratus, all kinds of spice.

**WASHINGTON PIE.**—One spoonful butter, 1 cup sugar,  $\frac{1}{2}$  cup milk, 2 cups flour, 1 egg, 1 teaspoon cream tartar,  $\frac{1}{2}$  teaspoon soda. Bake in two thin sheets.

**CREAM FOR PIE.**—One pint milk, 2 eggs,  $\frac{1}{2}$  cup flour, 1 cup sugar; let the milk come to a boil, stir in the ingredients; (which have been beaten together) cook a few minutes; flavor; spread this cream between the sheets, and serve.

**FRUIT CAKE.**—One pound sugar, 1 pound butter, 10 eggs, 1 pound raisins, 1 of citron, 1 of currants; chop and rub the fruit into 1 pound flour, 1 cup molasses, teaspoon soda foamed in the molasses, 1 nutmeg,  $\frac{1}{2}$  cup of cloves and cinnamon mixed; put the fruit and flour in last. These ingredients will make two good sized loaves, and will keep a year.

**FRENCH LOAF CAKE.**—Three pounds flour, 3 eggs, 3 nutmegs, 2 pounds butter,  $2\frac{1}{2}$  teaspoons saleratus, 2 pounds sugar, 1 glass brandy, raisins.

**POUND CAKE.**—One-half pound butter, 6 eggs, 1 pound flour, 1 cup sweet milk, 1 pound sugar, 1 teaspoon cream tartar,  $\frac{1}{2}$  teaspoon soda, flavor with lemon.

**COCOA DROPS.**—One pound grated nut,  $\frac{1}{2}$  pound sugar, white of 1 egg, not beaten. Dry in a cool oven on buttered tins.

**WHITE MOUNTAIN CAKE.**—Whites of 12 eggs, 1 pound flour, 1 cup sweet milk, 1 pound white sugar, 1 teaspoon cream tartar,  $\frac{1}{2}$  pound butter,  $\frac{1}{2}$  teaspoon soda, lemon—*Maine Farmer*.

**MUSTARD PLASTER.**—By using syrup or molasses for mustard plasters, they will keep soft and flexible, and not dry up and become hard, as when mixed with water. A thin paper or fine cloth should come between the plaster and the skin. The strength of the plaster is varied by the addition of more or less flour.

**FOR A FELON.**—When indications of a felon appear, take a piece of rennet and soak it in warm milk until it becomes soft, then apply it to the part affected, renewing it occasionally, and keeping on until a cure is produced.

## USEFUL RECIPES.

**FLEAS ON HOGS.**—Rubbing coal oil on hogs will cure them of fleas, their sleeping places should also be cleansed and white washed, the floors sprinkled with chloride of lime, or washed with cresylic soap.

**SURFEIT IN HORSES.**—The best cure we have ever found for surfeit is Breinig Fronefield & Co's. Cattle Powder, manufactured by Frederic A. Miller, 135 N. Front Street, Philadelphia, and sold by all druggists and store-keepers at 25 cents a pack. Give your mare a tablespoonful two or three times a day mixed with her feed.

**FOOT-ROT IN HOGS.**—Wash the feet out clean, and cut away all the diseased parts with a sharp knife, then take verdigris, *bole armenian*, and sugar of lead equal parts, rub them well together until they are reduced to a fine powder, sprinkle this over the sore, place a little dry tow over it, and tie it neatly and firmly down with tape, keep on a dry floor, next day dress it with butyr of antimony, and a light dressing should be given every day until the animal is well.

**MURRAIN IN HORSES.**—Take sweet spirit nitre  $\frac{1}{2}$  ounce, laudanum  $\frac{1}{2}$  ounce, chloride of lime in powder 2 ounces, prepared chalk 2 ounces, rub them well together, give in a pint of warm gruel. This may be repeated every six hours until the purging is abated. After this has been accomplished, we must try and recall the appetite, and restore the strength by the following tonic drink: take columbia root, 2 drams; canella bark, 2 drams; ginger, 1 dram; sweet spirit of nitre,  $\frac{1}{2}$  ounce; rub them together, and give in a pint of thick gruel, until rumination is re-established, the food should consist of gruel or any other nutritive food.

**PUMPKINS FOR COWS.**—Pumpkins are considered by our best dairymen in this country, to be valuable for milk cows, increasing both the flow and the quality of the milk, they should not, however, be fed in great quantities alone, but mixed with meal, and if cooked all the better.

**BONE SPAVIN.**—Take muriatic acid, 4 ounces; proof spirit, 2 ounces; common salt, three ounces; water, 1 quart; apply daily by means of a sponge cut to fit, and tied on the hock. Keep it constantly moist, let the animal have rest.

**CATARRH IN THE HEAD.**—Take balm of gilead buds, one ounce; skunk cabbage, three drachms; slippery elm, three ounces; lobelia, two drachms; all powdered fine and mixed; divide into three powders give one at each feed.—The discharge can be cured by the following *catarrh stuff*, powdered bayberry bark, bloodroot and lobelia, equal parts, to be blown into the nostril with a quill.

**POLL EVIL IN HORSES.**—If it has broken, wash the sore clean with castile soap and warm water, then inject and dress it with spirits of turpentine, pyroligneous acid and linseed oil, equal parts mixed. Fir balsam has also a very good effect on indolent and morbid parts. So soon, however, as the parts show a disposition to heal, dress with tincture of aloes and myrrh. Keep the bowels open.—*From American Stock Journal*.

**TO STOP BLEEDING.**—It is said that bleeding from a wound on a man or beast, may be stopped by a mixture of wheat flour and common salt, in equal parts bound on with a cloth. If the bleeding be profuse, use a large quantity, say from one to three pints. It may be left on for hours, or even days, if necessary.

The person who gave us this recipe says that in this manner, he saved the life of a horse which was bleeding from a wounded artery; the bleeding ceased in five minutes after the application,

## The Florist.

### FLORICULTURE---FOR OCTOBER.

PREPARED BY JOHN FEAST, Florist, Baltimore.

Up to this writing frosts have occurred, and time should not be lost in making preparation to protect the plants. Those that will keep in frames had better be set in, and given plenty of air. Take up all plants that have been planted out for winter flowering. Attend to the storing of all soils for winter use. Keep as little fire-heat as possible until actually required, as plants do better when kept cool during the early part of winter—a low temperature is best, unless plenty of early plants are wanted.

*Camelias*—Syringe occasionally, and give moderate waterings at this season.

*Azaleas*.—Keep in a cool part of the house, except where wanted for flowering early. Attend now to tying up the plants in shape, and do not give too much water.

*Chrysanthemums* should be liberally watered; use liquid manure or guano freely. Give plenty of air and keep them clean.

*Pelargoniums*.—Place these near the glass, and keep rather dry, in a cool situation.

*Roses*.—Those that have been taken up should be kept shaded until they are well established.

*Mignonette*, *Alyssum* and such, for flowering, should be forced to bloom early.

*Hyacinth Roots*.—These should be potted now for an early bloom.

*Callas*.—Repot in good sized pots, and give plenty of water.

*Greenhouse Bulbs* of different kinds, repot now, placing only the strong bulbs in pots.

*Plants*.—Sow seed now to have strong plants early.

*Heaths*, and all cape plants, must be kept in the coldest part of the house.

*Cactuses* will require but little water till the return of spring, except the *Truncata* species.

*Catadivums* will now be drying off. Give little water when the leaves decay.

*Ferns*.—These should be kept in a warm, shady situation. Like the *Lycopodiums*, they do best in a moist atmosphere.

*Curnations*.—Take up and repot. Keep them shaded till they recover from moving.

*Gladiolus* should be taken up when the foliage shows signs of decay.

*Herbaceous Plants* of most kinds may be taken up and divided, if large enough to separate, and reset in the borders.

*Hot-house Plants* will require a little fire at night to keep them from being checked, if they are wanted to flower early; but plenty of air should be given at all times when the weather is fine.

### NEW ADVERTISEMENTS.

John A. Thompson.....	<i>Flour of Bone, &amp;c.</i>
Wm. Parry.....	<i>Asparagus, &amp;c.</i>
Lamb Knitting Manuf. Co..	<i>Lamb's Knitting Machine.</i>
Lukens Pierce.....	<i>Trees and Plants—Osage Orange, &amp;c.</i>
King & Murray.....	<i>Pear Trees, &amp;c.</i>
Francis Morris.....	<i>Chester White Pigs.</i>
Matthew A. Cox.....	<i>Keeping Sweet Potatoes.</i>
W. F. Heikes.....	<i>Apple Seedlings.</i>
Brugiere & Thebaud.....	<i>Andre Leroy's Nurseries.</i>
Wm. T. Boyer & Co.....	<i>Farm Grist Mills.</i>
Jabez Bailey.....	<i>Farm for Sale.</i>
M. H. Disbrow.....	<i>Advertising Agent.</i>
Colwells, Shaw & Willard..	<i>Tin-Lined Lead Pipe.</i>
Manufacturing Co.....	<i>German Polish Salts.</i>
Chas. S. Oudeshuys.....	<i>Foster Peach.</i>
Gould Brothers.....	<i>Excelsior Linen Marker.</i>
Barnes & Morse.....	<i>Montgomery's Revolving Screen.</i>
E. Whitman & Sons.....	

Subsoiling sound land that is not wet, is eminent-ly conducive to increased production.

### CATALOGUES RECEIVED.

From Ellwanger & Barry, Mount Hope Nurseries, Rochester, New York, their No. 1 Descriptive Catalogue of Fruits; No. 2.—Descriptive Catalogue of Ornamental Trees, Shrubs, Roses, Flowering Plants, &c.; No. 3.—Descriptive Catalogue of Greenhouse and Hot-house Plants, &c.; No. 4.—Wholesale Catalogue of Ornamental Trees, &c.

From E. Moody & Sons, Lockport, New York, Wholesale Trade List for autumn of 1871.

From William Parry, Cinnaminson, N. J., Pomona Fruit Farm and Nursery, Cash Price List for 1871 and 1872.

From Hoopes, Brother & Thomas, Cherry Hill Nurseries, West Chester, Pa., Semi-Annual Trade List for 1871.

From Maxwell, Pratt & Co, Canaseraga Nurseries, Livingston County, New York, Wholesale Price List for 1871 and 1872.

From James Fleming, N. Y., Descriptive Catalogue of Hyacinths and other Flowering Roots.

From B. K. Bliss & Sons, New York, their Autumn Catalogue and Floral Guide, containing Dutch and Cape Flowering Bulbs, and List of Small Fruits, &c., &c.

From Massey & Hudson, River Bank Greenhouses, Chestertown, Kent Co., Md., Price List of Bulbous Roots, Garden and Flower Seeds, Vegetable Plants, &c.

From Dr. C. W. Spalding, President, St. Louis, Mo., Grape List of the Cliff Cave Wine Company.

From Richardson & Gould, New York, their Autumn Catalogue of Bulbs and Flowering Roots, Small Fruits, &c.

From John S. Collins, Moorestown, N. J., his Price List of Small Fruit Plants, &c.

John Saul, Washington City, D. C., his Descriptive Catalogue of Hyacinths, Tulips, Crocus, Narcissus, Lillies, and other Bulbous Flower Roots, with a choice selection of winter blooming plants, for autumn, 1871. Also, Wholesale Catalogue of Fruit, Evergreen and Ornamental Trees, Shrubs, Stocks, Roses, Greenhouse Plants, &c., for the autumn of 1871 and spring of 1872.

From W. F. Heikes, Dayton, Ohio, Semi-Annual List of Trees, Shrubs and Plants, for autumn of 1871.

From J. Wentz & Co, Rochester, New York, Wholesale Catalogue for autumn of 1871.

CARROLL COUNTY FAIR.—The Third Annual Fair of the Carroll county Agricultural Society, will be held at Westminster, on Tuesday, Wednesday, Thursday and Friday, October 3d, 4th, 5th and 6th, 1871. The Fairs of this Society are always well attended and attractive.

WOOD'S HOUSEHOLD MAGAZINE.—This valuable monthly for October is received and abounds in choice reading. It is steadily increasing in public favor, and we predict for it a prosperous future. It is *One Dollar* a year. Published by S. S. Wood & Co., Newburgh, New York.

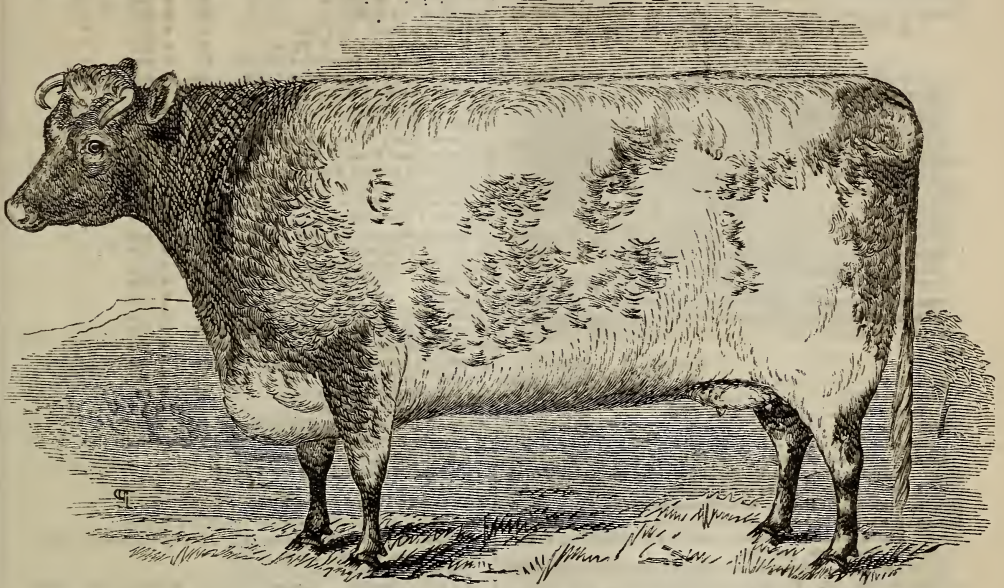
AYRSHIRES.—Professor Cook writes the *Country Gentleman* that on the New Jersey Agricultural College Farm the average Ayrshires are better milkers than the common stock, and are always in better condition on the same food. One Ayrshire cow pronounced medium, gave 2,957 quarts of milk last year. The best of the common cows gave 2,921 quarts. At the Norway Agricultural College very favorable reports are given of the Ayrshires. The greatest yield of milk reported from one cow in one year, is 4,559 quarts. In four years the average yield of 20 or 21 Ayrshire cows was 700 quarts of milk per day.

Specimens.---Specimen copies of the *Maryland Farmer* sent FREE to any address.



## THE MARYLAND FARMER.

### MASTERPIECE. AT 5 YEARS.



Masterpiece, roan calved; January 11th, 1866. Bred by S. Thorne, Thorndale, N. Y. Got by 6th Duke of Thorndale, 4752 (23794) The property of CHARLES E. COFFIN, Muirkirk, Md.

**HOME MADE CANDLES.**—Many of our readers in rural districts will find that candles can be made economically, by mixing a little melted beeswax with the tallow to give durability to the candle, and to prevent its "running." The light from a tallow candle can be improved in clearness and brilliancy by using small wicks which have been dipped in spirit of turpentine and thoroughly dried.

**LEAVING** the production of sugar entirely out of the question, the sugar beet is a most valuable plant for the farmer, for it is admirably adapted for feeding stock. The farmers of Vermont find it to be the best food for milch cows, increasing the secretion of milk, in a very remarkable manner, and in the dairy districts of that State, the cultivation of this crop has become general.

**HEN-RE-WARD.**—Somebody perpetrates the following: It is related that when Beecher was in the country, last summer, he lost his hat, and found it, in about a week, in a barn where he had left it, but with four eggs in it. This was as it should be. Beecher had just written a eulogy on the hen; why shouldn't the Hen-re-ward Beecher?

**GENTLEMEN RIDERS.**—The Maryland Jockey Club has determined to open a sweepstake for the next meeting, for horses owned and ridden by members of the club. The subscriptions will be small, and the club will add a handsome silver racing cup.

The New England *Farmer* expresses the opinion that soils which are made up of less than fifty per cent. of sand, drained and plowed twelve inches in depth, finely pulverized and well manured, will bring a fair crop every year, be the weather wet or dry. In other words, our cotemporary means that high farming is always successful. It never spoke a truer word.

**MAKING CLOVER HAY.**—Cut it early; before the heads are turned brown. Cut it when it is dry. After it is cut, wilt it as rapidly as possible, by turning it, or throwing it up with the tedder. The leaves will not fall off in this process. Then cock and cap it, and let it remain thirty or forty hours. Open to the sun and air a little and get it in.

**ALL** cows in a herd should drop their calves as near the same time as possible. If one should drop her calf after you have commenced to pack and put away butter, do not put her milk with the rest for two weeks or more, as it is impossible to keep butter made from it, which will not damage the rest. This is one very common source of an occasional bad tub of butter.

The chopping or grinding of grain to be fed to the stocks operates as a saving of at least twenty-five per cent.

Deep plowing greatly improves the productive powers of every variety of soil that is not wet.



# THE MARYLAND FARMER.

## BALTIMORE MARKETS--Sept. 30.

Prepared for the "Maryland Farmer" by GILLMORE & SON, Produce Commission Merchants, 159 W. Pratt st.

[Unless when otherwise specified the prices are wholesale.]

ASHES.—Market quiet. Pots, \$8.50.

BEEFWAX.—30@37 cts.

BROOM CORN.—Red, 2@3 cts.; Green, 4@5 cts.

BUTTER.—Receipts free; stocks accumulating, a fair demand for fancy and choice lots; medium grades not wanted, and show no basis for quotation. Common is only taken by bakers at and below last prices. We quote:—Choice, 23@25 cts.; Prime, 18@20 cts.; Good, 14@16 cts.; Fair, 12@13 cts.; Common, 9@11 cts.; Grease, 8 cts.

COFFEE.—Market firm, and under full control of sellers. Jobbing lots of Rio: Ordinary, 16 cts.; Good, 16½ cts.; Prime, 17 cts.; Choice, 18 cts.; Fancy, 19 cts.

COTTON.—Prices steady, with moderate business between exporters and consumers. Receipts at Southern ports behind those of last season, and foreign advices show activity. Holders, therefore, sustain the market with firmness.

	Upland.	Gulf.
Ordinary.....	17 cents.	17½ cents.
Good ordinary.....	18½	19
Low middling.....	19½	20
Middling.....	20	20½
Good Middling.....	21	21½

EGGS.—Market active; receipts light, and prices advancing. Farmers should take great pains in improving their stocks, as large eggs meet with ready sale, and at higher figures than small ones. We recommend the Dark Brahma as an excellent layer, choice for the table, and healthy fowl. Fresh, near by County, 25@28 cts per doz.; Fresh, Western, 24@25 cts. per doz.

FEATHERS.—Prime Geese, 70@75 cts.; Common and mixed, 40@50 cts. Market well supplied.

FRUITS.—Dried.—Apples meet with ready sale at 10 to 12 cts. for Southern bright choice sliced; bright quarters at 7@8 cts.; dark fruit not wanted. Peaches are in good request for choice sliced of bright color, at 15@17 cts.; bright quarters, and halves peeled, at 12@14 cts.; dark colored of every description are neglected; quarters and halves dull at 7@10 cts. Cherries wanted at 25 cts for choice, while those cured with molasses are dull sale. Blackberries active, at 10@11 cts. for prime, and 7@9 cts. for common. Green.—Apples are in large supply from the immediate neighborhood, also from the West, and prices low, selling from \$2@2.75 per bbl. Peaches have almost ceased to come in; those arriving sell at \$2@3 per bushel for choice. We would recommend farmers to set out but few varieties, and only choice fruit, such as we know from long experience meets with ready sale to packers and shippers. We would suggest for the first coming in the Early Troth, which is a good bearer and keeper, and also meets with ready sale to shippers and market hucksters. Hale's Early should be banished from all orchards; it is a miserable keeper and poor seller. Early York is also a good variety for the market, but the best varieties for packers and shippers, and which sell for the highest prices are the Early Crawford, Late Crawford, Susquehanna, Smock, Heath Cling, Heath Free. This is a good month for setting out trees. Pear market bare; this is one of the most profitable fruits cultivated; the Bartlett and Duchess D'Angouleme are the favorite varieties, especially the former, for packers as well as the table. Quinces are scarce, at \$8@9 per bbl. Damsons sold well this season. Cherries—the White Grafton, the earliest variety, sold at \$5@6 per bbl.

FLOUR.—In sympathy with wheat has also advanced.

We quote:		
City Mills Super.....	5.50	@ 6.25
“ Extra.....	7.00	@ 8.00
“ Family.....		\$10.75
Howard Street Super.....	5.50	@ 6.00
“ Extra.....	6.25	@ 7.00
“ Family.....	7.50	@ 8.50

GRAIN.—Wheat.—Market strong under active foreign demand; also for millers, and prices have advanced. Maryland Red, ordinary, \$1.40; good, \$1.60; prime, \$1.70; choice, \$1.80. Corn.—Market firm. Southern Yellow, 76@77 cts.; Western Yellow, 74@75 cts.; Western Mixed, 72@73 cts.; Southern White, 80@82 cts. Oats, active at 51@56; Rye, active at 80@85 cts.

MOLASSES.—Grocery grades dull. New Orleans, 40 to 60 cts.; Porto Rico, 35@50 cts.; Cuba, 3 @ 0 cts.

MILL FEED.—Brownstuffs, 18@30 cts.; Middlings, 25 to 30 cts., and Heavy, 40@45 cts.

FERTILIZERS.—No change to note.	We quote:
Peruvian Guano—gold.....	\$68 ½ ton of 2000 lbs.
Orchilla and Rodonda.....	30 ½ ton “
Turner's Excelsior.....	60 ½ ton “
Turner's Ammo. S. Phos.....	50 ½ ton “
E. F. Coe's Ammo. S. Phos.....	55 ½ ton “
Ober's Phospho-Peruvian Guano	65 ½ ton “
Ober's Super-Phosphate of Lime..	25 ½ ton “
Soluble Pacific Guano.....	60 ½ ton “
Patapco Guano.....	60 ½ ton “
Flour of Bone.....	60 ½ ton “
Andrew Coe's Super-phosphate..	52 ½ ton “
Baugh's Raw Bone S. Phos.....	50 ½ ton “
Excelsior Cotton Fertilizer.....	54 ½ ton “
Excelsior Soluble Phosphate.....	56 ½ ton “
Excelsior Tobacco Fertilizer.....	60 ½ ton “
Meat and Bone Guano.....	40 ½ ton “
Magnum Bonum Soluble Phos.....	52 ½ ton “
Ruth's "Challenge" Sol. Phos.....	60 ½ ton “
Zell's Raw Bone Phosphate.....	56 ½ ton “
Rhodes' do.....	50 ½ ton “
Mapes' do.....	50 ½ ton “
Bone Dust.....	45 ½ ton “
Hornor's Maryland Super Phos..	50 ½ ton “
Hornor's Bone Dust.....	45 ½ ton “
Dissolved Bones.....	60 ½ ton “
Baynes' Fertilizer.....	49 ½ ton “
"A" Mexican Guano.....	30 ½ ton “
"A" do.....	50 ½ ton “
Moro Phillips' Super-Phosphate..	50 ½ ton “
Whann's Raw Bone Super Phos..	50 ½ ton “
Wd. Fertilizing & Manufacturing	
Co's Ammoniated Super-Phos- phate.....	.55 ½ ton
Fine Ground Bone Phosphates.....	.30 ½ ton
Plaster.....	\$2.25 ½ bbl.

PROVISIONS.—Shoulders, 8½ cts.; Sides, 9 cts.; Sugar cured Hams, 18 cts.; Lard, 11 cts.

RICE.—Market bare of Carolina.

SALT.—Steady. Ground Alum, \$1.45@1.50; Fine, \$2.25@2.30; Turk's Island, 48@50 cts. per bus.

SEEDS.—Clover, \$8.50@9.00 per bus.; Timothy, \$3.50 @ \$4.00 per bus.; Flax, \$1.90@2.00 per bus.

SUGAR.—Dull and heavy for Grocery grades. Porto Rico, 10@11 cts.; Demerara, 11@13 cts.

VEGETABLES.—Sweet Potatoes.—Jersey Seed, \$1.75 to \$2 per bbl.; Yellow Virginia, \$1.25@1.50 per bbl.; Red, 75 cts. @ \$1 per bbl.; Cullings, 50@75 cts. Onions.—In large supply; Red, \$2@2.25 per bbl.; White, \$3.25@3.50 per bbl. Turnips.—\$1@1.25 per bbl.

WHISKEY.—\$1@1.05.

WOOL.—Unwashed, 45@48; Washed, —.

## No Humbug.

I have discovered a simple and cheap mode of keeping Sweet Potatoes sound with any quantity in bulk and in any climate from crop to crop. All that is necessary is to have a suitable house or cellar large enough to hold the desired quantity. I propose to sell the recipe for use of a family for five dollar—the purchaser signing an agreement not to communicate the information to any person. Those wishing to purchase, will send five dollars to J. H. KNIGHT, Esq., Cashier of The Commercial Savings Bank, at Farmville, Va., with authority for him to sign the agreement for them, who will retain the money until the purchaser receives the recipe. As to the utility of my mode I give as reference, Dr. Wm. E. Osborne, Rev. J. V. Crute, J. W. A. Sanders and Dr. W. J. Epps, of Curdsville, Buckingham Co., Va.; H. E. Warren, Commission Merchant, Farmville, Prince Edward Co., Va. For terms, for clubs five or more, address,

MATTHEW A. COX.  
Curdsville, Buckingham County, Va.

WHALE CHASE.—A splendid sea story, full of stirring adventure and thrilling scenes among the wonders of the southern seas. Complete in one handsome double-column volume, only 15 cts. of any bookseller or newsdealer, or by mail on receipt of price by JESSE HANEY & CO., 119 Nassau-st., N. Y.



# FLOUR of BONE.

## GROUND BONE.

Fertilizer,  
Fish Guano,  
Ammoniated Phosphate,  
Refined Poudrette  
and Compost,  
Warranted pure, and for sale by the BALTI-  
MORE CITY FERTILIZING MANUFAC-  
TURING COMPANY, Office No. 4 WOOD  
STREET, Corn Exchange Building, where  
directions for use and testimonials of farmers  
can be had

JNO. A. THOMPSON,  
1t TREASURER,  
BALTIMORE.

## The Marion Star.

Established Quarter of a Century Ago.

Most Popular Journal in the Pee-Dee Section.—  
Largest Circulation in Eastern Carolina.

Offers special inducements to the merchants of  
Baltimore. Terms liberal. Address,

McKERALL & STEDMAN, Editors,  
oct-1f Marion C. H., S. C.

## IMPERIAL ASPARAGUS.

The Largest and Best Flavored.

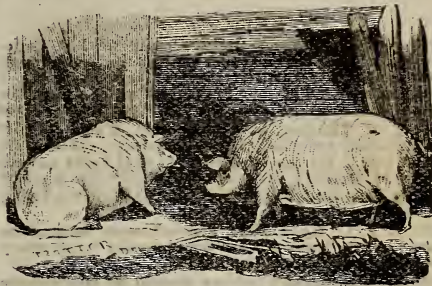
HERSTINE and other RASPBERRIES. *Straw-*  
berries that yielded over \$1,000 per acre. Black-  
berries, Fruit and Ornamental TREES. Send  
for Catalogues.

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CINNAMINSON, N. J.



THE BEST INVESTMENT a farmer can make. Saves  
from 4 to 6 profits between his wool and cloth. Makes  
every article of knit goods needed in a family. No wide-  
awake farmer can afford to be without one. For circulars  
and samples address LAMB KNITTING MANUFACTURING CO.,  
Chicopee Falls, Mass. oct-2f

## PREMIUM CHESTER WHITES A SPECIALTY.



JERSEY, AYRSHIRE, AND SHORT HORN  
CALVES, SOUTH DOWN AND COTSWOLD  
SHEEP, imported BERKSHIRE AND YORKSHIRE  
SWINE, 12 VARIETIES OF POULTRY all pure  
bred

Send stamp for descriptive Circular and Price  
List. Address FRANCIS MORRIS, Importer and  
breeder of Improved Live Stock, No. 18 North 13th  
St., Philadelphia, Pa. oct-3t

## ERCILDOWN & COATESVILLE NURSERIES.

20 000 APPLE TREES, 3 and 4 year—best varieties.  
75 000 PEACH TREES, 1 year, "  
15 000 CHERRY TREES, 1, 2, and 3 year, "  
5 000 STANDARD PEAR, 2 and 3 year, "  
10,000 DWARF PEAR, 2 and 3 year, "  
5,000 PLUM, 1 and 2 year, "  
200,000 CONOVER'S COLOSSAL ASPARAGUS.  
200,000 OSAGE ORANGE.

All the above at reduced rates. Send for Price Lists.  
LUKENS PEIRCE,  
oct-2t Coatesville, Pa.

## FOR SALE

AT THE

## Ercildown and Coatesville Nurseries,

A large and fine assortment of  
FRUIT TREES and SMALL FRUIT PLANTS.  
Catalogues and Price Lists *Gratis*.  
Orders promptly forwarded.

oct-2t LUKENS PEIRCE,  
COATESVILLE, PA.

## OSAGE ORANGE.

100,000 1 year PLANTS—medium size.  
100,000 2 year PLANTS—large size.  
For Price List, address

oct-2t LUKENS PEIRCE,  
COATESVILLE, PA.

# FOSTER PEACH.

This remarkable Peach originated with Mr. J. T. Foster, of Medford, Mass. The Fruit has taken the first premium of \$20, at Horticultural Hall, Boston, for three years. It ripens ten days earlier than the Early Crawford. Mr. Foster says he sold the fruit readily at \$12.00 per dozen peaches.

Mr. T. C. Thurlow, of Newburyport, Mass., says: "I have carefully examined the tree in bearing for three years, and am free to say that I believe it to be as hardy and productive as the Early Crawford, (which it very much resembles,) and more than double that well known variety in size."

Mr. J. F. C. Hyde, (Pres. Massachusetts Horticultural Society,) says, "such peaches would readily bring twenty-five cents each in the Boston market."

Mr. Robert Manning, of the Journal of Horticulture, says, "it is in quality fully equal to the Early Crawford."

We have a limited quantity of trees to offer, one year from the bud, at the following prices:

First Quality, \$1.00 each, \$10.00 per dozen.  
Second, " 75 " 8.00 " "

We also offer, for the Fall Trade of 1871, the Largest and most Elegant Stock of STANDARD and DWARF FRUIT TREES, GRAPE VINES and SMALL FRUITS, ORNAMENTAL TREES, WEeping TREES, SHRUBS, ROSES, etc., etc., ever offered by us.

Descriptive Catalogues will be furnished on application. Also, Trade List for Nurserymen and Dealers.

## GOULD BROTHERS,

Monroe Co. Nurseries, ROCHESTER, N. Y.  
It

## THE GREAT NEED OF THE SOIL IS POTASH.

150 TONS

## GERMAN POTASH SALTS,

For fertilizing purposes, containing 28 to 30 per cent. Sulphate of Potash; also, Sulphate of Magnesia, and other fertilizing elements, but no sand or dirt—the very best article for mixing with Bone Dust or other Fertilizers, or with Stable Manure.—Imported and for sale in Bags, at \$45 per ton, (2,000 lbs.) by

Charles L. Oudesluys,  
NO 67 EXCHANGE PLACE,

BALTIMORE.

Also, Muriate of Potash, and Concentrated Ashes, or Persicator.

50,000 tons of Kainit are used annually by European Agriculturists.

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Desiring to advertise should send for M. H. Disbrow's Select List of

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## NURSERIES,

ANGERS, FRANCE,

The Most Extensive in Europe.

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## Farm Grist Mill,

SIMPLE, CHEAP AND DURABLE.

It is adapted to any kind of power, and grinds all kinds of Grain rapidly. Send for a Descriptive Circular.

WM. T. BOYER & BRO.,

2101 Germantown Ave.,

Philadelphia, Pa.

oct-3t

## PUBLIC SALE OF FINE STOCK.

Circumstances require so much of my time South, I will sell at auction, October 24th, some of my Stallions and Stallion Colts, and Mares, Colts and Fillies of any age, Short Horn Bulls, Cows, Heifers, &c., that may be wanted. Terms liberal, if well secured. Catalogues sent to those applying.

S. W. FICKLIN,

BELMONT STOCK FARM,

NEAR CHARLOTTESVILLE, VA.

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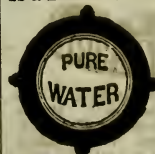
## TIN-LINED LEAD PIPE,

Is a Block-Tin Pipe, heavily coated with solid lead.

It is the best and cheapest Water Pipe when strength and durability are considered. By its use, iron-rust, lead and zinc poison are all avoided, and general health promoted. Price, 15 cents a pound for all sizes. Circulars and sample of pipe sent by mail, free. Address the COLWELLS, SHAW & WIL-LARD M'FG Co., No. 213 Centre Street, New York. Also, Manufacturers of

Block-Tin Pipe, Sheet-Lead, Lead Pipe, Solder, &c. Orders solicited and filled at sight.

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THE SECOND ANNUAL FAIR

—OF THE—

Alabama Agricultural

—AND—

MECHANICAL ASSOCIATION,

WILL be held on the grounds of the Association at PICKETT SPRINGS PARK, near Montgomery, beginning,

TUESDAY, Oct. 31st,

AND CONTINUING FIVE DAYS.

The Magnificent Sum of

TWENTY THOUSAND DOLLARS

IS OFFERED IN PRIZES,

to be contended for in the various Departments of Agriculture, Mechanic Arts, Manufacturers, Domestic and Household Products, Ladies' Fancy Department, &c., &c.

Competition open to Alabama and the World.

Extensive Grounds, well watered throughout, with Commodious Stands—Power House, Sheds, Stables, &c., &c., all reached by a Branch Track of the Western Railroad, leading right into the buildings.

Arrangements will be made with all the Railroad lines leading into, and through the State, to convey freights and passengers at half rates for the round trip.

The Western Union Telegraph Co., and the Southern Express Co., will have offices on the Grounds during Fair week.

The Directory of the Association are determined to make this INDUSTRIAL EXHIBITION second to none in the Union. They invite co-operation at home and abroad, in the great work before them, and pledge themselves individually and collectively, that every interest shall receive due consideration, and every contributor to the Fair shall be fairly and liberally dealt with.

MIKE L. WOODS, Sec'y.  
M. L. MOSES, TREASURER.

S. G. REID, PRESIDENT.

GEO. B. HOLMES,  
G. L. WERTH,  
S. SCHUESSLER,  
J. P. DICKINSON,  
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DIRECTORS.

September 6, 1871.

FOR SALE.



oct-11

A choice Farm of 183 Acres, in Chester County, 30 miles from Philadelphia. Address,

JABEZ BAILEY,  
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PEAR TREES! PEAR TREES!

One, two, three and four years old.

\$180 TO \$400 PER THOUSAND.

No charge for delivery in New York City. Nursery stock of all kinds. Nursery established in 1791  
lt KING & MURRAY, Flushing, N. Y.

APPLE SEEDLINGS

In large quantities at the lowest rates. See Price List.  
oct-2t W. F. HEIKES, Dayton, Ohio.

HUNTING, TRAPPING AND FISHING. A new practical and reliable guide, giving briefly just the information wanted about care and use of arms, making and using traps, snares and nets, baits and baiting, poisons, bird-lime, preserving, stretching, dressing, tanning and dyeing skins and furs, and much on fishing. With 50 engravings. Only 20 cts. of any bookseller or news-dealer, or by mail on receipt of price by JESSE HANEY & CO., 119 Nassau-st., N. Y.

EXCELSIOR LINEN MARKER. Nothing better for marking clothing. Agents Wanted. Barnes & Morse, Rochester, N. Y. 1t

FINE STOCK FOR SALE.

Circumstances require so much of my time, for a while, in the South, I will sell any of my *Thorough-bred Horses, Colts, &c.*, or the same of my Imported Percheron Norman Horses, or fine bred Short Horn Cattle of any age, and at lower prices than ever before offered.

Apply early in September to me, or after to my agent,

S. W. FICKLIN,  
BELMONT STOCK FARM,  
near Charlottesville, Va.

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T. H. KEMP.

J. W. KERR.

CHOPTANK NURSERIES,

Denton, Caroline County, Md.

APPLE TREES—2, 3, and 4 years old, vigorous and healthy, (varieties suited to Southern soil and climate) *at exceeding low prices.*

VIRGINIA CIDER CRAB—3 to 5 feet, \$20 per 100, \$150 per 1000.

PEAR TREES—Dwarf and Standard—Cherry, Plum, Apricot, Quince and Nectarines. The varieties of each class comprises what impartial trial has proven to be of actual merit and reliability.

PEACH TREES—(Our Specialty,) a full assortment of the best market varieties.

SHADE AND EVERGREEN TREES—Flowering Shrubs, &c. Grape Vines 1, 2 and 3 years old; strong and well rooted, in large or small quantities, at low prices. Blackberries, Raspberries, Gooseberries, Currants and Strawberries, everything in this line that fair trial has proved worthy. Asparagus and Rhubarb, also Osage Orange Plants by the 1000 or 10,000.

Packing done in the best manner, and no pains spared to see that all orders sent us are shipped in good season and condition. Price Lists mailed free to all applicants.

mar-1y\*

KEMP & KERR,  
Denton, Caroline Co., Md.

We have a limited supply of

ST. LOUIS BONE FLOUR,

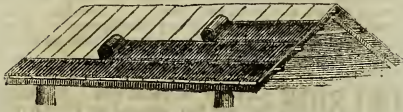
The particles of which are about the size of Timothy seed. *We recommend this as something very superior.*

We will send a sample, by mail, to any one desirous of seeing it, and think an examination will convince any one of its superiority over anything in the market.

Price \$48 per ton of 2000 pounds.

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This Felt is thick, durable and cheap. Coated ready for immediate use. Can be applied by inexperienced hands. Send for circular. Tarr and Dry Roofing Paper; Slating Nails, Pitch, &c.  
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A fine assortment of the best new varieties. Descriptive Priced List mailed to applicants.

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## Pear, Plum, Apple and Cherry Trees,

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MADE FROM

Super-Phosphate of Lime, Ammonia and Potash.

WARRANTED FREE FROM ADULTERATION.

This manure contains all the elements to produce large crops of all kinds, and is highly recommended by all who used it, also by distinguished chemists who have, by analysis, tested its qualities.

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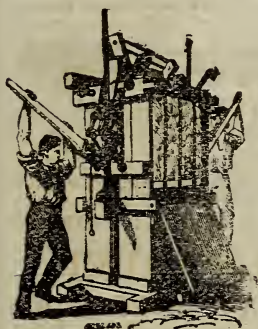
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**THE GREAT FERTILIZER FOR ALL CROPS.**

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Alderney, Durham, Devon and Ayreshire Calves, best breed of Dogs; Maltese Cats; American Deer; Peafowls in full plumage; Rouen, Aylesbury and Muscovy Ducks; Bronze Turkeys and Geese; Blue Turkeys; White, Blue and Speckled Guinea Fowls; Madagascar and Angora Rabbits; Fancy Pigeons, Guinea Pigs, and all Fancy Fowls. Also, EGGS for sale.

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**Patent Horse Stall**

Patented April 25th 1871,

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I have on hand for sale a selected lot of Cotswold Bucks, from finest Imported Stock, one, two and three years old; price \$40, \$50 and \$60 each, boxed and delivered on Steamer at this place. When three or more are delivered to one order, a deduction of 20 per cent. will be made from above prices.

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The subscriber offers for sale on the most liberal terms many new

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of unsurpassed beauty. Also, a large collection of HOT and GREENHOUSE PLANTS, selected while in Europe, and still quite rare here. Also, everything worthy of notice, with Cut Flowers, Boquets and Plants for Decorations furnished on the lowest terms.

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We offer a VERY LARGE stock of the above, at LOW RATES; also a complete assortment of

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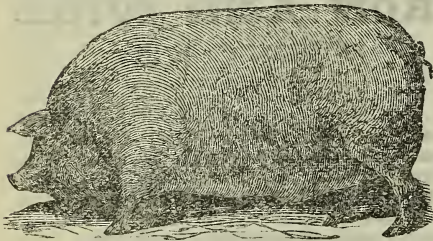
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Lime Spreaders, Plaster Sowers, Hay Tedders, Grist Mills, Corn and Cob Crushers, Hay Presses, Iron Field Rollers.

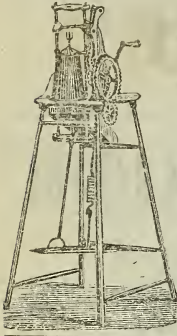
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Best machine ever offered for paring, coring, quartering or slicing apples. Does the entire work expeditiously, promptly and well—separating core and parings from the fruit at once. Will prepare more fruit for drying, pies, or family use, than six of ordinary parers. For farmers it is indispensable. Fruit can be taken care of in season, instead of allowing it to rot in the orchard. Three times the price of parer can be saved on every crop. A barrel of apples can be got ready for pies in one hour, saving in labor alone, in a single year, many times the cost of the parer. Territory for sale. Agents wanted. Send for circular.

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Standard and Dwarf Fruit Trees.  
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Ornamental Trees, Shrubs and Plants.  
New and Rare Fruit & Ornamental Trees.  
Bulbous Flower Roots.

Descriptive and Illustrated priced Catalogues sent pre-paid on receipt of Stamps, as follows:  
No. 1—Fruits, 10c. No. 2—Ornamental Trees, 10 cts.  
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**ROCHESTER**

[1830.]

**COMMERCIAL**

[1871.]

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[Established 1848.]

To the FARMERS and PLANTERS of Maryland and the South generally.

**HORNER'**

## MARYLAND SUPER-PHOSPHATE.

(We court the Chemist's inquiry.)

After 23 years' experience in the Fertilizing business, and after establishing a wide reputation for the purity and excellence of his Bone Dust, the subscriber has been induced to prepare a Phosphate suitable to the requirements and every way worthy the attention of the Southern Farmer.

The "MARYLAND" is a rejuvenator and permanent improver of the soil. It stimulates equal to Peruvian Guano, and sustains equal to Bone, being composed almost entirely of these ingredients, with a very liberal percentage of Potash in the residuum. There is no adulterator nor inferior article used—every part of the Phosphate being of essential benefit to the land. Neither pains nor expense have been spared in its preparation, and we claim for it the greatest benefit to the farmer from the smallest outlay.

For Cotton, Wheat and Corn, and as a general stimulant and aliment for worn and impoverished land, there can be nothing superior. It is warranted to run as high in Ammonia, and higher in Bone Phosphate, than any other fertilizer in the market.

Price \$50 per ton, in new bags. No charge for delivery.

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Office and Warehouse, 54 S. Gay St. General Warehouse, Cor. Chew and Stirling Sts., Baltimore, Md.

## BONE DUST \$45,

Bone Meal \$50, Dissolved Bone \$47,

Our own manufacture, in new bags; Eastern and Western Bone Dust, \$35. Peruvian Guano delivered from Peruvian Government Warehouse at the lowest rates. No charge for delivery.

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## HALL'S PATENT HUSKING GLOVES!



HALF GLOVES.

FULL GLOVES.

The very best thing ever invented for husking corn. They give universal satisfaction in use. A man can husk from  $\frac{1}{2}$  to  $\frac{3}{4}$  faster with them. They absolutely prevent sore hands and cold fingers. The half gloves cover the parts of the hands which become sore. Price \$1.50. The full gloves are made in the best manner of tanned buckskin; price \$2.50. Both styles have claws attached and made of three sizes—large, medium and small, for both right and left handed persons. Sent prepaid on receipt of price. A liberal discount to dealers. Address, **HALL HUSKING GLOVE CO., 90 South Water Street, Chicago, Ill.**  
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THE MARYLAND FARMER.

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HIGHEST PREMIUM



ELASTIC STITCH

## FAMILY SEWING MACHINES.

### POINTS OF EXCELLENCE.

Beauty and Elasticity of Stitch.

Perfection and Simplicity of Machinery.

Using both threads directly from the spools.


No fastening of seams by hand, and no waste of thread.

Wide range of application without change of adjustment.

The seam retains its beauty and firmness after washing and ironing.

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The Highest Premiums at all the Fairs and Exhibitions of the United States and Europe have been awarded the Grover & Baker Machines, and the work done by them, wherever exhibited in comparison.

 The very highest prize, THE CROSS OF THE LEGION OF HONOR, was conferred on the representative of the Grover & Baker Sewing Machines, at the Exposition Universelle, Paris, 1867, thus attesting their great superiority over all other Sewing Machines.

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jan-1y

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## THE ANDREW COE Super-Phosphate <sup>OF</sup> Lime

Manufactured only by E. WHITMAN & SONS,  
From Ground Bone, Peruvian Guano, Sulphuric Acid and Potash.  
IS THE MOST RELIABLE PHOSPHATE IN THE MARKET.  
Price \$52 Per Ton, in Sacks, of 160 pounds each.

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*Its Superior an Impossibility.*

Analysis July 14th, 1871:

Ammonia.....	4.38
Bone Phosphate of Lime.....	49.51

Which is the highest analysis yielded by pure bone. The largest particles are smaller than clover seed.

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
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**AMMONIATED**

**Bone Super-Phosphate.**

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ANALYSIS—Ammonia.....2.83

Soluble Phosphate of Lime.....29.51

Bone Phosphate of Lime.....10.67

Composed of the most concentrated materials, it is richer in Ammonia and Soluble Phosphates than any other fertilizer sold, except our "EXCELSIOR," and is made with same care and supervision. Uniform quality guaranteed Fine and dry, in excellent order for drilling. Packed in bags and barrels. ~~15~~ PRICE \$50 PER TON.

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**A. B. FARQUHAR, Manager and Proprietor.**

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